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WORLDRADIO

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PRB-1 bill introduced in New York

A bill has been introduced in the New York State Assembly to codify the essence of the limited federal preemption known as PRB-1 in New York State law. Assembly bill A-9947 would require localities to "reasonably accommodate" Amateur Radio antennas and would prevent localities from restricting antenna structures to less than 95 feet above ground level or from restricting the number of support structures.

ARRL Hudson Division Director Frank Fallon, N2FF, says New York amateurs now have the chance to enact a law to "solve most of our tower problems." According to Fallon, the bill represents two years of work by his Hudson Division PRB-1 Task Force, which spearheaded the bill's development as well as a strategy to get it enacted. The Task Force used other successful state PRB-1 bills as models and had assistance from ARRL Headquarters. Fallon's staff and all three ARRL section managers in the Hudson Division stand squarely behind the measure. Support also has been obtained from Atlantic Division section managers in New York, and plans are under way for a statewide promotional effort.

Ten states have PRB-1 laws in place. New York joins California and Kansas among the list of states that have pending PRB-1 legislation. The New York measure is one of the few to specify a minimum antenna height.

The bill, introduced 07 March is in the Committee on Local Governments, which must vote on the measure before it goes to the full Assembly. Assuming the measure makes it past both chambers, it would go to Governor George Pataki, a former amateur, for his signature.

Fallon is urging clubs and individuals to contact their New York State lawmakers, Assembly and Senate, to co-sponsor or support A-9947. Echoing the PRB-1 language, it would provide that any ordinance impacting the placement, screening or height of antennas "must reasonably accommodate Amateur Radio antennas and shall impose the minimum regulation necessary to accomplish the political subdivision's legitimate purpose."

The bill also would prohibit any local ordinance, by-law, rule or regulation, or other local law from restricting Amateur Radio support structure height to less than 95 feet above ground level or from restricting the number of antenna support structures.

For more information, contact ARRL Hudson Division Director Frank Fallon, N2FF at: n2ff@arrl.org; telephone: 516/746-7652. — *ARRL Letter*

Another Ham warned about "free-band"

Yet another North Carolina amateur has been warned by the FCC to stay off Freeband. This as the government tells Thomas F. Reynolds, Senior, N4TFR, of Salisbury that it has evidence that he has been using Amateur transmitting equipment on the Citizens Band and other frequencies including FM and Lower Sideband on 27.320 MHz and 27.375 MHz. The 14 March FCC letter also charges that Reynolds has been offering for sale, over the air on those frequencies, transmitting equipment not meeting the Commission's certification standards.

The FCC says that the use of such equipment and excessive power levels jepordizes Reynolds Amateur License. The FCC also says that this operation constitutes unlicensed radio operation under Section 301 of the Communications Act of 1934 and could subject Reynolds to criminal prosecution and seizure of his transmitting equipment. Reynolds was given 20 days to respond to the FCC charges. — *FCC, Newsline*

FCC fines Washington firm for illegal amplifier sales

The FCC has affirmed a $7,000 fine on Cellular Systems Northwest Inc of Enumclaw, Washington, for willful and repeated violations of the Communications Act and FCC rules relating to the sale of transmitting equipment. In a Memorandum Opinion and Order 16 March, the FCC said Northwest, a consumer electronics dealer, on two occasions in 1997 and 1998 sold and offered to sell "external radio frequency power amplifiers (commonly known as 'linear amplifiers') to two different FCC agents posing as a member of the general public. The FCC said the amplifiers were capable of operating in the 27-MHz Citizens Band. A Notice of Apparent Liability was issued in June 1998. Northwest sought recission of the $7,000 forfeiture saying it never intended to offer or recommend the linears for CB use, its violation was unintentional, that it had ceased selling the illegal equipment and that it is "small retailer" attempting to make ends meet. The FCC was unmoved and upheld the $7,000 fine. The company was given 30 days to pay. — *FCC, ARRL Letter*

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New Mexico amateurs stay on the air in huge blackout

New Mexico suffered what could be the largest power loss in the state's history 18 March. Amateur Radio operators stood by to fill the communication gap as the outage that resulted from a grass fire left thousands without power.

"We had done our Y2K exercises well, and it paid off," said New Mexico ARRL Section Manager Joe Knight, W5PDY. Knight says smoke from a large grass fire caused the large insulators on a major power line to arc, shutting down the line. Three major power lines from the Public Service Company of New Mexico's Four-Corners Power Plant followed suit. The outage subsequently took out a major power generating unit. "In a domino effect, most of the state of New Mexico, a small part of southern Colorado and part of El Paso, Texas, were out," Knight explained. Thanks to emergency power, hams and repeaters remained operational.

"Needless to say, there were no cell phones, and the 911 system was jammed," Knight said. ARES/RACES was activated and in full operation through repeaters throughout the state. "Operators were cautioned to transmit only for emergency traffic in order to conserve our battery power on the linked repeater system. Since the shopping malls, grocery stores, restaurants, filling stations and traffic lights were down, it made for a real Y2K emergency."

Knight says the linked system was able to help keep the public up to date on what was happening. In addition, 21 battery-powered HF stations checked into the New Mexico Roadrunner Traf-

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fic Net and were on standby until the power was restored. Two broadcast radio stations, KOB AM and KDEF AM, were on the air using emergency power generators. Knight said the New Mexico State Emergency Operations Center and the Albuquerque EOC also were on line using emergency power.

"There were several traffic accidents and a few burglaries, but the hospitals all operated on emergency power," Knight reported. Approximately 1.3 million people were without power for about three to four hours following the outage, which began around 4:30 p.m.

In Las Cruces, officials had to halt the state's high school basketball playoffs when the power went out in the arena.

"It was certainly a wakeup call for amateurs in the affected areas," said Knight. — *ARRL Letter*

New NWS severe weather preparation plan

The National Weather Service wants to turn America's communities into a storm-fighting machines as the agency unveils its long awaited nationwide verson of its StormReady program. StormReady is really a code of principles and techniques the National Weather Service claims will better prepare Americans to face severe weather from floods to tornadoes to hurricanes. It was developed by the NWS office in Tulsa which has been running the pilot program for a year in eastern Oklahoma and parts of Arkansas.

StormReady encompasses just about everyone in a given municipality who is involved in severe weather prediction and emergency preparedness. The plan includes includes Hams and CB radio operators.

To be dubbed StormReady, a community must have a 24-hour warning system in place as well as an operational emergency operations center. It must also have more than one method of alerting the public in case of a storm and have a weather-monitoring system. A public readiness program involving seminars and exercises is also required.

The program calls for regional advisory boards to examine cities that want to participate. A StormReady designation would have to be renewed every two years.

The National Weather Service hopes that many cities across the nation will become a part of StormReady. This means even more chances for amateurs to provide public service to their communities. — *NWS, Newsline*

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On the cover: The Borneo/Hillview Gardens team — Paul Newberry, Jr., N4PN; Mike Mraz, N6MZ; Jani Kusmulyana, YBØUS; Bill Beyer, Jr. N2WB; Bob Schenk, N2OO and Tom Harrell, N4XP.

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Editor's Log

An amazing thing happened at the launch facility for the Space Shuttle *Discovery*. Shortly after the launch, the crew was found bound with duct tape, and hidden in a closet. Officials were notified of this two hours after the launch, and the cry heard around the cape was, "Who are those guys?" Apparently a group of individuals had taken the spacecraft. The shuttle was not heard anywhere but on Amateur Radio frequencies, leading officials to believe that a group of Hams had hijacked the most expensive vehicle ever built for a joyride. After being tracked during re-entry and disappearing from radar over Northern California, the shuttle was found abandoned just outside of Winnemucca, Nevada. The only clue to the identity of the hijackers was a trail of discarded AA batteries, empty diet soft drink cans and several empty bags of cheese snacks. Officials admit they have little to go on in tracking down the hijackers, but add, "They must be extremely intelligent to pull this off."

We have determined the following may be suspects in the case:

- **John Pinkham, K3PER Annapolis, MD**
- **Emory R. Schley, N4LP Ocala, FL**
- **Herman Barkemeyer, Jr., KF9TY Lexington, IN**
- **John R. Kent, KB9PEC Palos Heights, IL**
- **Thomas L. Keister, Jr., N5RTF New Orleans, LA**
- **Ralph Miller, N5NEC Fort Worth, TX**
- **Harvey Laidman, W8DX Encino, CA**
- **W.M. Baird, KF7VE Yucaipa, CA**
- **Mike Camp, KI7FQ El Cerrito, CA**
- **Ed Braaten, K6EKB El Dorado Hills, CA**
- **E. Russel Fish, AH6IP Issaquah, WA**

The only comment from this new group of ***Worldradio*** Lifetime Subscribers was, "Now THAT was a DXpedition." Although ***Worldradio*** is suspected of aiding and abetting in this crime, our comment is, "you can't prove a thing, copper!"

•

Listed last month was another lifetime subscriber, but due to a missed stroke of the key, Joseph D. Lively was listed as KJ5S. His call is actually KJ5FS.

With the announcement of restructuring of the Amateur Radio licenses, many thousands of Hams wishing to upgrade have been doing just that! Congratulations to all of those who successfully upgraded!

•

Alright, all you QSL experts — explain what I am doing wrong. After a contest near the end of last year, I sent direct QSL requests to 30 foreign stations. Each request was mailed in one of those cute airmail envelopes with the blue and red border and I took care not to put either my call sign or the foreign station's call sign on the outer envelope. The envelope contained a QSL card, a folded self-addressed envelope, an IRC and a green stamp. To date, I haven't received a single reply. So what am I doing wrong? Should I just give up and use the bureau exclusively?

Last year at the Fresno DX convention there was talk about electronic QSL cards. That plan is looking better and better. At least to this deserving DXer.

•

So there I was, looking around the 20-meter band one evening, hoping to make contact with a new one. Lo and behold — a new one is working a list! I patiently wait until he asks for "6" stations and throw my call sign out. Since I am only running 100 watts, it takes a little time to get acknowledged. He finally says, "Whiskey Fox Six station, go ahead." I gleefully punch down the PTT button and give my call, my name and he is 20 over 5-9 in Sacramento. I release the PTT button and what do my ears hear? You guessed it — another station tuning on top of me! And he is tuning for three minutes! Did the DX station copy my information? I don't know because he is now calling for the "7" district. He never did get back to the "6" area, because the band folded before he could.

What is it with these people that just HAVE to tune on top of a rare DX station? You could tune up somewhere else (like 5 or 10 KHz up or down), but I guess that would mean your signal will be down something like 1/3,000 of an "S" unit and you may not make the contact!

I've got an idea for the manufacturers of Amateur Radio gear. If someone is tuning for more than five seconds, a CW identification is sent out automatically so we can tell who you are!

Sounds good to me!!! — *WF6O*

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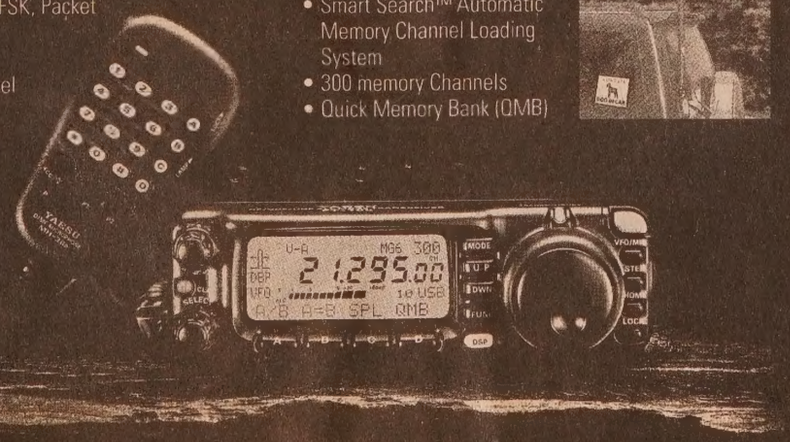

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Which bands will we lose?

Vic Black, AB6SO

From time to time we hear threats of the imminent loss of one or more amateur bands. Sometimes the threats arise because of band incursions by pirates and unlicensed users. Usually, we're told that commercial interests are lusting after our bands or that somehow we don't deserve particular bands because of abuse, under use or a total lack of use. Which bands are most likely to be re-allocated to other users? Will it be the lesser-used WARC bands (30, 17 or 12 Meters)? Does anyone want 160 Meters? How about 2 Meters, 220 MHz or 440 MHz? The 900 MHz band, a shared Industrial, Scientific and Medical (ISM) band, is heavily used by Part 15 commercial interests. Lots of companies would love to get our microwave bands to use for wireless communications, local area computer networks, vehicle locators, vehicular traffic control, burglar alarm systems and other uses.

We are truly fortunate to have a wide range of frequency bands available for use. In fact, U.S. amateurs have operating privileges using more modes, propagation types and frequency bands than anyone but the military. Because of this, we tend not to overpopulate any one band or mode at a given time (although it may not seem that way on a major contest weekend or during a major DXpedition).

Our operating modes include, but are not limited to, AM, FM, SSB, CW, modulated CW (MCW), many data modes, various image modes and spread spectrum. Some techniques depend heavily on operator skills while others rely on high tech computer aids. Others are basically appliance operator modes similar to using a telephone.

When the FCC stopped issuing station licenses and began to issue only operator licenses they recognized the changing nature of Amateur Radio in a mobile society. We now use radios at base stations, remote bases and repeaters, from boats and airplanes, while mobile, in the field as portable stations or even while walking or riding a bicycle. New software allows combining Amateur Radio with the Internet for controlling remote bases and distant repeaters. More and more operators are using all-digital radios as remote base stations controlled over telephone lines in order to circumvent antenna restrictions at home.

Propagation types range from Near Vertical Incident Skywave (NVIS) to Earth-Moon-Earth (EME), or "moon bounce." In between we use groundwave, HF skywave, Sporadic-E, Trans-Equatorial Propagation, Tropospheric Ducting, Field Aligned Irregularities, Aurora Backscatter and Meteor Scatter. Modulated laser beams have been bounced off the bottoms of clouds.

Some modes, propagation types and frequency bands are inter-dependent. EME works best at frequencies from 1 to 10 GHz because the background cosmic noise level is low there and it's relatively easy to build very high gain antennas, RF power amplifiers and low noise receiving amplifiers for that frequency range. Groundwave works better on the longer wavelength bands such as 160 and 80 Meters. Skywave refraction from the ionospheric F layer shines in the high frequency range from about 7 to 30 MHz. The more exotic propagation modes are in their glory on the VHF, UHF and SHF bands from about 50 MHz to 1.2 GHz. Some modes such as high speed packet or high speed meteor scatter CW require very large bandwidths which are readily available on the microwave bands (some of these bands are several GHz wide). VHF and UHF bands are particularly well suited for satellite communications. Even so, we are constantly trying new modes on old bands and old modes on new bands. Will the first amateur trans-Atlantic 2-meter QSO be by PSK-31 ?

To determine which bands we are most likely to lose, we need to go back to our very roots and see why the FCC puts up with our hobby in the first place. We are charged with the responsibility of fostering international goodwill, providing emergency communications backup and furthering technology through experimentation. We do all of these things very well. By nature, amateurs are gregarious and love talking to strangers

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We really shine when it comes to innovative thinking and expanding our technical boundaries at the least expense through the application of creative imagination. Many Amateur Radio experiments would be impossible for profit-centered commercial interests to pursue. On any given weekend, we can field thousands of stations around the world to study propagation, for example (although we call it by other names such as DXing and Contesting). We don't wait years to publish our results in some obscure journals, either. Word gets around the world in minutes when something unusual happens. Since many amateurs work for high-tech companies, many of the things we learn by applying our hobby are later perfected and taken to market by commercial interests.

Unfortunately, these same commercial interests would like to share, or even have exclusive use of, our amateur bands. History has shown that when bands are shared, interference problems arise. We, as Amateur Radio operators, may not have the political, and especially economic, clout to fight that battle. However, as more and more poorly designed consumer products enter the marketplace the potential for interference from one product to another will develop until that system may collapse under its own weight without any help from amateurs. Who are you going to blame when the interference to your high priced consumer product is coming from similar, competing systems used by your neighbors or your own family members?

Price plays a part in the picture as well. Hype over High Definition TV (HDTV) is waning as manufacturers learn that the buying public may not be willing to pay the price simply for the sake of new technology. New technology alone is not a guarantee of success in the marketplace.

The important thing to keep in mind is that the FCC has never said we would lose bands because of under utilization. The reason we might be in trouble is because we aren't furthering the art through innovative experimentation. Many innovations arise from efforts to reduce complexity and cost (we tend to excel in this aspect of the hobby). And if a new mode isn't currently legal, we're expected to petition for rule changes. The most recent example is the relaxation of rules governing spread spectrum use. Another is the move toward legalizing a new band at 136 kHz or 160-190 kHz in order to study Very Low Frequency (VLF) propagation and techniques. Low noise microwave techniques are being tried there with good results. There's also an international effort to make the currently shared 40-Meter band an amateur-only band. With the worldwide move away from HF navigation aids and commercial ship-to-shore CW with subsequent spectrum availability, there's interest in a possible new HF Amateur Radio band around 5 MHz.

Even with all of the experimenting going on, most talk about future technology is simply a snail slow evolutionary application of present technology. The time is ripe for some Jules Verne type visionaries to start the creative juices flowing. All things considered, it seems we're unlikely to lose any bands. The loss of any one band would mean less chance for experimentation using modes and techniques that are peculiar to that particular band. If anything, we are more likely to be assigned new bands to encourage even more experimentation. The old adage "use'em or lose'em" still applies. But it doesn't mean just idle chatter on the local repeater. It means to think creatively and to use the bands we currently have access to by applying our special knowledge and skills to further the art and science of Amateur Radio communications. Only then can we be assured of maintaining use of our current band allocations.

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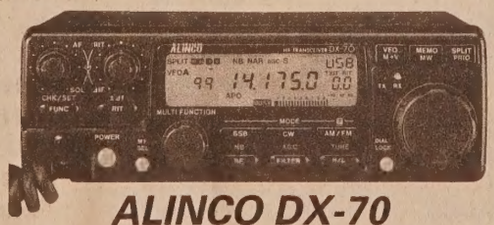
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David Splitt, KE3VV

ARRL files for reconsideration

The first order of business is to thank all of you who wrote or emailed about the March "Rules & Regs" column on restructuring. The temptation is to fill this month's column with all the kind words of praise or agreement, or to quote the few nay-sayers and take up the cudgel of refutation, but I promised more scrutiny of the ARRL and its forays against the FCC this month, and scrutiny you shall have.

I understand that taking issue with anything the ARRL does or says is anathema (in the truest sense of that word) to some of the League's faithful. One New Jersey amateur, Carl Felt, N2XJ, took issue with the publication of criticism of ARRL actions in ***Worldradio*** magazine and encourages the magazine to "get back in support of all who work for the betterment of our great hobby, the Amateur Radio Service." Beyond the fact that the opinions expressed in this column are my own, and do not necessarily reflect the editorial position of ***Worldradio***, and so forth, I believe that most readers do not equate criticism of the ARRL with being against Amateur Radio. If I thought the ARRL was worthless, I would cancel my membership, but there are many things about the ARRL that are worth praising and perpetuating. Unfortunately, the manner in which the ARRL deals with the FCC on rulemaking matters affecting the amateur service needs some serious rethinking.

In addition, the title and one of the major purposes of this column is "rules & regs" ... commentary about the governmental oversight of Ham radio through the laws enacted by Congress and rules adopted by the FCC. As the largest organization of Amateur Radio licensees, the ARRL is looked upon by many amateurs as their "voice in Washington." So when the FCC says "No!" (over and over) to the ARRL by dismissing its petitions for clarification of or changes in the regulations affecting Amateur Radio, it is the responsibility of this column to take a hard look at what the ARRL is doing "inside the Beltway" to represent its constituents.

In February 1996, the ARRL filed a Petition for Rule Making with the FCC, seeking review and modification of the Commission's policies and procedures related to the limited preemption of state and local regulations affecting Amateur Radio facilities. The current (at that time and now) FCC policy was established in 1985, when the FCC issued its "Memorandum Order and Opinion" known now simply as "PRB-1." The policy is simple. Local and state authorities cannot use zoning and other regulations to block amateurs from erecting transmitting antennas. Such ordinances and local procedures "must make reasonable accommodation for amateur communications and must constitute the minimum practicable regulation to accomplish the local authority's legitimate purpose."

As discussed at length in the February "Rules and Regs" column, the ARRL petition asked that the FCC extend the limited preemption of local governmental regulations to covenants, conditions, and restrictions ("CC&Rs") in property deeds, condominium by-laws, and other "private" limitations on the erection and use of Amateur Radio antennas. CC&Rs were specifically excluded from PRB-1 by the FCC on the grounds that they are "contractual agreements between private parties."

In its dismissal of the 1996 ARRL petition (RM-8763) in an Order released on 19 November 1999, the FCC maintained its earlier position on preemption of CC&R's. Here is where things get interesting.

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4	KG4GUJ	++	KV4EP	AF4RF
5	KD5JNN	++	KM5WU	AC5TR
6	KG6ARH	++	KR6RA	AD6KA
7	KD7IFX	++	KK7WZ	AC7BX
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the authority to include CC&Rs under PRB-1. Instead, the Order says that the FCC was "not persuaded" by the ARRL petition and supporting comments that the FCC should change its policy toward private restrictive covenants. In its conclusion, the Order repeats this assessment of the ARRL petition; "In our view, Petitioner has not demonstrated that the clarifications requested are necessary. Accordingly, we conclude that the public interest would be best served by denying the ARRL request for modification and clarification of the Commission policies and procedures" concerning limited preemption.

To its credit, the ARRL did not decide to give up the fight to limit private antenna restrictions. It then had two choices. The first choice was the hard one. It could recognize that the FCC had subtly included in its Order of dismissal a major bit of guidance for future strategy, or it could ignore the FCC's words and seek reconsideration of the Order on its own merits. As I predicted in the February column, the ARRL took the easy road and petitioned for reconsideration.

The FCC said it had not been "persuaded" by the ARRL's arguments and "comments in support" of the petition that changes in FCC policy are "necessary or appropriate at this time." The ARRL was as much as told to re-examine its case and spend some time, effort, and money putting together a truly persuasive argument in favor of preempting CC&Rs. The road mapped out for the ARRL by the FCC was to get its ducks in order before approaching the FCC again on the preemption issue.

What did the ARRL do?

The ARRL went right back to the FCC and filed a Petition for Partial Reconsideration, the main thrust of which was to castigate the FCC for its "terse and superficial Order" (the ARRL's words, not mine) and demand that the FCC change its mind. I am going to quote liberally from the ARRL petition, and I have some fairly strong opinions about it, so if you want to read the whole thing and make up your own mind about its tone and approach, it is available on the ARRL website at http://www.arrl.org/announce/regulatory/prb-1/prb1-recon.pdf.

The main problem with the ARRL petition is not its petulant and condescending language, although that is bad enough (and the grammar isn't all that great, for those of you who nit-pick commas). Throughout its petition for reconsideration the ARRL bites at the heels of the FCC. The introduction to the petition concludes: "The League suggests that the Commission has failed to adequately evaluate the request, and has given insubstantial attention to it." Later in its argument, the petition says that the "League disagrees entirely with the WTB's (Wireless Telecommunications Bureau) premises, and its illogical conclusions."

As a wise lawyer and mentor once told me before my first appellate argument many years ago, "there is a world of difference between being tough and being insulting." I think in this instance, his wise advice might be paraphrased by saying that you can't "bully" the FCC into making new policy if it doesn't want to make policy. And that was an important facet of the FCC Order.

The real problem with the ARRL petition is that it not so subtly accuses the FCC and its legal staff of being stupid. In Part 2 of the introduction, the Petition for Reconsideration says, "The League's petition did not request the adoption of substantially new policy." Insofar as the application of PRB-1 preemption to CC&Rs this statement is simply not correct. To make matters worse, the ARRL then suggests that the FCC was wrong because the FCC Order was supposedly based on the premise that the FCC has no jurisdiction over CC&Rs." In order to reach this conclusion, the ARRL equates the FCC's use of the word "concern" with "jurisdiction." The ARRL petition says that the FCC's theory behind omitting CC&Rs from PRB-1 was that "the covenants were purely a matter of contractual agreement and not subject to preemption." The only problem is the FCC Order never said that! The FCC said that CC&Rs were "not generally a matter of concern" to the FCC because they were private matters. In other words, the FCC did not say it could not preempt CC&Rs, it said that it chose not to do it. Recognizing this is a key factor in adopting a strategy and approach to the FCC. But the ARRL petition ignores it.

Instead the ARRL petition says (in bold letters) that lack of jurisdiction "is no longer a valid premise, and no longer an accurate statement of the Commission's jurisdiction over private land use regulations." Since the FCC never said that it was, trying to paint the FCC's position on CC&R preemption as being based on a faulty legal premise is, in essence, telling the FCC that it is too dumb to know the law on which their jurisdiction is based. The ARRL then goes on to recite the law on FCC jurisdiction over private contracts such as CC&Rs, using the Commission's own words in another rulemaking matter. In its 1996 decision regarding satellite dish antennas, the FCC said, "the government may abrogate restrictive covenants that interfere with federal objectives enunciated in a regulation." In other words, the FCC can make rules implementing its federal interest in Amateur Radio communications by preempting CC&Rs. This was just as true in 1985 when the FCC issued PRB-1 as it is today. The only major difference in the case of satellite receiving antennas is that the FCC chose to issue rules.

What the ARRL ignores in its Petition for Reconsideration is the fact that Congress virtually ordered the FCC to make rules in the case of satellite antennas in Public Law 104-104 (1996). In short, the FCC had the jurisdiction and authority to preempt CC&Rs and could exercise its discretion to do so. It enacted preemptive rules for satellite receiving antennas not only because it could, but also because the Congress told it to do so. The Congress has not made such a statement with respect to Amateur Radio, so the only way we are going to get preemption for Ham antennas (in the absence of an Act of Congress) is for the FCC to exercise their discretion and choose to adopt CC&R preemption rules.

The remainder of the ARRL Petition for Reconsideration continues in much the same vein. There is a non-sequitur about whether the FCC had to decide whether state court enforcement of CC&Rs was "state action" in order to dismiss the ARRL's original petition. Putting aside the legalese, the ARRL is simply arguing based on its earlier faulty premise that the FCC dismissal was based on lack of jurisdiction rather than a decision by the FCC not to exercise its authority and discretion.

That is the meat and potatoes of it,

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my friends. The ARRL Petition for Reconsideration is based almost entirely on the premise that the FCC doesn't know its rulemaking authority from a hole in the ground. Therefore, once "enlightened" by the ARRL, it must change its mind and enter into an immediate rulemaking proceeding to preempt CC&Rs. That is very, very unlikely. In fact, the denial of the ARRL petition by the FCC can probably be accomplished in a rather simple paragraph that might read something like...

"After consideration of the League's Petition for Reconsideration we find no reason to revisit our earlier decision. The ARRL is quite correct that the FCC has authority under the Commerce Clause and its Congressional mandate to adopt rules that abrogate certain private contractual relationships, such as CC&Rs. However, as we stated in our original Order in this proceeding, we are not persuaded by the League that we should exercise our discretion at this time to enact rules to preempt amateur antenna structures from the provisions of CC&Rs." Case closed.

Hey, folks, maybe the FCC will change its mind and grant the petition. But there is not a whole lot in the ARRL's Petition for Reconsideration that gives me much hope for that. The unfortunate aspect of the approach taken by the ARRL is that Amateur Radio really does have a strong case for preemption. The FCC has already agreed that outdoor antennas are a necessary component of most amateur communications. The problem is demonstrating a strong nexus between most CC&Rs and amateur facilities. This takes more than legal arguments. It requires selling the facts to the FCC.

How do you think the satellite TV industry got their way with the Congress and FCC on preemption of CC&Rs on their receiving antennas? Lobbying. But satellite TV is a major commercial enterprise. How can Amateur Radio expect to exercise that much clout inside the Beltway? Simply put, it can't. But it can still make a strong and persuasive argument. I just hope that the FCC does not take several years to issue a denial of the ARRL Petition for Reconsideration, so we can get down to business and do the hard, tedious, and detailed homework that needs to be done before Amateur Radio operators can successfully petition the FCC to issue rules extending preemption to CC&Rs.

We might as well get a head start on that project now. If you live in a condominium or restricted community that is affected by CC&Rs, send the details of your story to me. E-mail or snail mail is fine. Several things are important. What CC&R language restricts you from erecting an antenna? How is the exercise of your amateur license privileges affected? What efforts have you made to obtain an exemption from the CC&Rs ? (and have you used the FCC's language "encouraging" reasonable accommodations for Hams?). How would your community be better off if you could put up an antenna? How are local ARES, RACES, or other emergency communications limited by the CC&Rs? How could you erect a suitable antenna without creating a substantial (or even noticeable) intrusion on the sensibilities of your neighbors? What sort of compromises can you suggest to allow antennas where you live? Do you know any prospective Hams who have decided to forego getting a license because of CC&R limitations where they live? This is the kind of information that will be needed to really persuade the FCC to make some rules to help amateurs affected by CC&Rs.

The expansion of condominium-type housing and restricted housing developments is going to continue. If the ranks of Amateur Radio operators expand under the new license restructuring, there are going to be more and more Hams affected adversely by CC&Rs. The next time the ARRL or any other group of amateurs petitions the FCC for action on CC&R preemption, there should be a huge appendix of evidence ready to support the need for FCC intervention. Something really persuasive.

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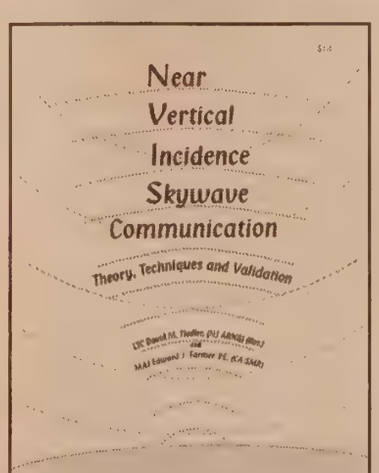

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1999 Hillview Gardens Borneo DXpedition

Bob Schenck, N2OO/9M6OO/V85OO

"Hey Jani! You wanna go on a DXpedition?" I asked, thinking it might be nice to head out for a couple of weeks with my old buddy Jani, YBØUS! "OK" was the response. "What do you say we start at 9M6AAC in Sabah, stop by the SEANET Convention in Brunei and finish up with a short operation from Viet-Nam?" Again, "OK" was the response from Jani. After looking at a few copies of the DX newsletters, I suddenly realized that there had been alot of activity from Viet-Nam lately, so I asked Jani another question. "Instead of Viet-Nam, what about Layang-Layang (Spratly) again?" (We went there in 1997 for a short operation). "OK" again was the response. Hmmm, let's see... Mike, N6MZ had once told me that he wanted to go to Layang-Layang to do some diving (both scuba diving and pileup diving!). Hey Mike! Wanna go to Spratly with us? "OK" was the response from Mike — and so on...

Well, now you get an idea of just how a DXpedition is born! It isn't all that mystical! Before I knew it, we had a total of 9 operators involved in a multi-hop DXpedition that I decided to call the "1999 Hillview Gardens Borneo DXpedition" since our 'base of operations' would be the Hillview Gardens Resort — 9M6AAC in Sabah, East Malaysia (http://www.qsl.net/9m6aac). We would start off at Hillview, where we would put together all the hardware for a one week stay on Layang-Layang Island in the Spratlies operating as 9M6OO. Next, we would move over to Brunei where we would attend the SEANET Convention before moving over to a friend's home for a three day operation as V85OO.

Finally, we would wrap up with a Multi-Single entry in the CQWW-CW from the Hillview Gardens ARC station, 9M6AAC. Simple, right?

Well, this DXpedition couldn't have been so well organized without the extensive use of e-mail. Literally hundreds of messages were exchanged in order to organize this trip. And, for the most part, everything went without a hitch as a result!

The story

The first thing we needed to do was make arrangements with the resort on Layang-Layang! So, in August, during a visit to Hillview Gardens, Jani flew out to personally make the necessary arrangements with the resort management and with Malaysian Navy personnel on the island. Although they are getting used to Amateur Radio on Layang-Layang, it is still very important to follow the appropriate procedures in order to get permission from the right people involved on the island. After a successful visit, Jani gave us the nod to continue with our plans for the DXpedition. Team members were selected and their participation was coordinated. Sponsors were solicited and equipment was accumulated and dispersed among the final team members for bringing in their baggage. Needless to say, the planning phase went with very few hitches.

The six operators that took part in the DXpedition.

The team gathers

The first group of six team members were to meet in Kota Kinabalu, Sabah, by noon on Sunday 07 November. Jani, YBØUS arrived during the previous week. Mike, N6MZ, Paul, N4PN, and Tom, N4XP, left on 03 November and stopped for a brief two night stay in Taiwan, where they operated as BVØDX. Bill, N2WB, met up with me at Newark Airport on 05 November

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The dedication ceremony for the new, enlarged, hamshack at the Hillview Gardens Resort. Bob Schenk, N2OO unveils the dedication plaque.

where we caught our Malaysian Airlines flight to Kuala Lumpur with a connection to Kota, Kinabalu. My baggage was about 50 pounds overweight but after explaining my plans in advance (Amateur Radio), an excess baggage waiver was issued! Thanks Malaysia Airlines!

Bill and I were met by Alfons, 9M6MU, Doris, 9W6DU and Jani at the airport at 2:30 a.m. and whisked away to a hotel for some rest. We got up at about 9:00 a.m. and had breakfast with Phil, 9M6CT and Phil, G3SWH who were both in town. Mike, Paul and Tom arrived at the airport right on time at around noon. After friendly exchanges at the airport, we moved over to Phil, 9M6CT's, QTH for a cool drink and visit before heading for Hillview.

Hillview Gardens Resort is a neat little secret hideaway for Ham Radio in Borneo! It was built by my old friend Alfons Undan, 9M6MU, back in 1997. I was there for that grand opening where we used the special event call 9M6HIL. Alfons provided a massive 85-foot tower and a radio. Over the past couple of years, we have been fortunate to accumulate quite an impressive amount of Ham Radio hardware, especially antennas, through sponsorships and donations. This was a natural place for our base of operations..

The ride from Kota, Kinabalu to Keningau, where Hillview Gardens is located, takes about two hours. It is a beautiful ride over the Crocker Mountain range. After winding through the mountains, you come down into the beautiful Tambunan valley covered with lush green rice paddies. Then, the road flattens and shortly you find yourself in the bustling town of Keningau. And, off to the south, high on a hill and easily seen from town is the Hillview Gardens Resort!

Upon arrival, we were treated to quite a surprise! The 9M6AAC shack had originally been set up in one of the resort's motel style rooms back in 1997. Without so much as a hint, Alfons and Doris were busy building a brand new Ham shack just for our arrival!

The new shack is at least three times the size of the old shack. Jani had been working all week prior to our arrival, setting up all the gear and re-running all the coax feedlines!

On 08 November, I was asked to dedicate the new shack declaring it 'open' at a special ribbon cutting ceremony attended by our team, as well as a group of local 9M6 amateurs from the area. It was quite an honor! A

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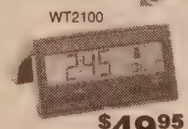

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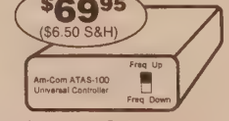

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Jani, YBØUS, breaks in the new installation at the Hillview Gardens Resort.

special plaque has been permanently hung at the entrance marking the dedication!

Our first job the next day was to bring down an A3W WARC beam from atop the big 85-foot tower at Hillview, replacing it with a new CD402 40-meter beam! We would be using the A3W on Layang-Layang. In between the antenna work, we would take a swim in the Hillview pool, and participate in a number of other "Hillview rituals" which include making concrete tile palm prints for the Hillview "wall of fame," having each team member plant a tree, and finally participating in a TAIPAI ritual, which is the sharing of a pot of special home-made rice wine! I was allowed to adopt a tree already grown since my presence at Hillview goes back over 20 years. Another ceremony! Ahh, they do make you feel special at Hillview!

Destination: Layang-Layang

After three nights at Hillview, it was time to pack everything up for the Layang-Layang DXpedition. We loaded the trucks for the ride back to Kota Kinabalu, where we would spend one night before heading to the airport for the early morning flight to Layang-Layang Island. We invited a few locals to have dinner with us, to thank them for their kind assistance. Michael Chin was the telekoms director before retiring recently. Mann Singh, 9M6MX, had loaned us some gear for the DXpedition, Phil, 9M6CT, had been helpful with transport and other logistics, and of course there was Alfons, 9M6MU, and XYL Doris, 9W6DU.

After the friendly gathering at a local Chinese restaurant, we headed to the hotel and a good night's rest. Our flight was to leave at 7:00 a.m.

Bright and early, we headed out to the airport. Upon arrival, we all had to be weighed along with our baggage! It was strange getting up on the baggage check-in scales to be weighed in! But, we were flying on a small chartered twin Otter airplane which had a specific weight limit! We panicked when a telecoms crew showed up expecting to fly out with us to the island! They had several hundred pounds of gear with them! They were going to repair the satellite telephone system on the island which was down. Fortunately, their weight plus our weight just made the limit. It was important that we get everything out to the island on this flight since it was the only scheduled flight for a few days. After paying excess baggage fees, we were promptly escorted out onto the field for boarding!

The flight out to Layang-Layang took about 1 hour and 15 minutes. The view was awesome as we approached. The pilot flew right over the island before circling around for a landing.

Layang-Layang Island is primarily a man-made island. It is part of a very large submerged atoll located in the South China Sea north of Kota Kinabalu. The original island was only outcroppings of coral heads where the Malaysian Navy had built a structure back in the 1970s. Eventually,

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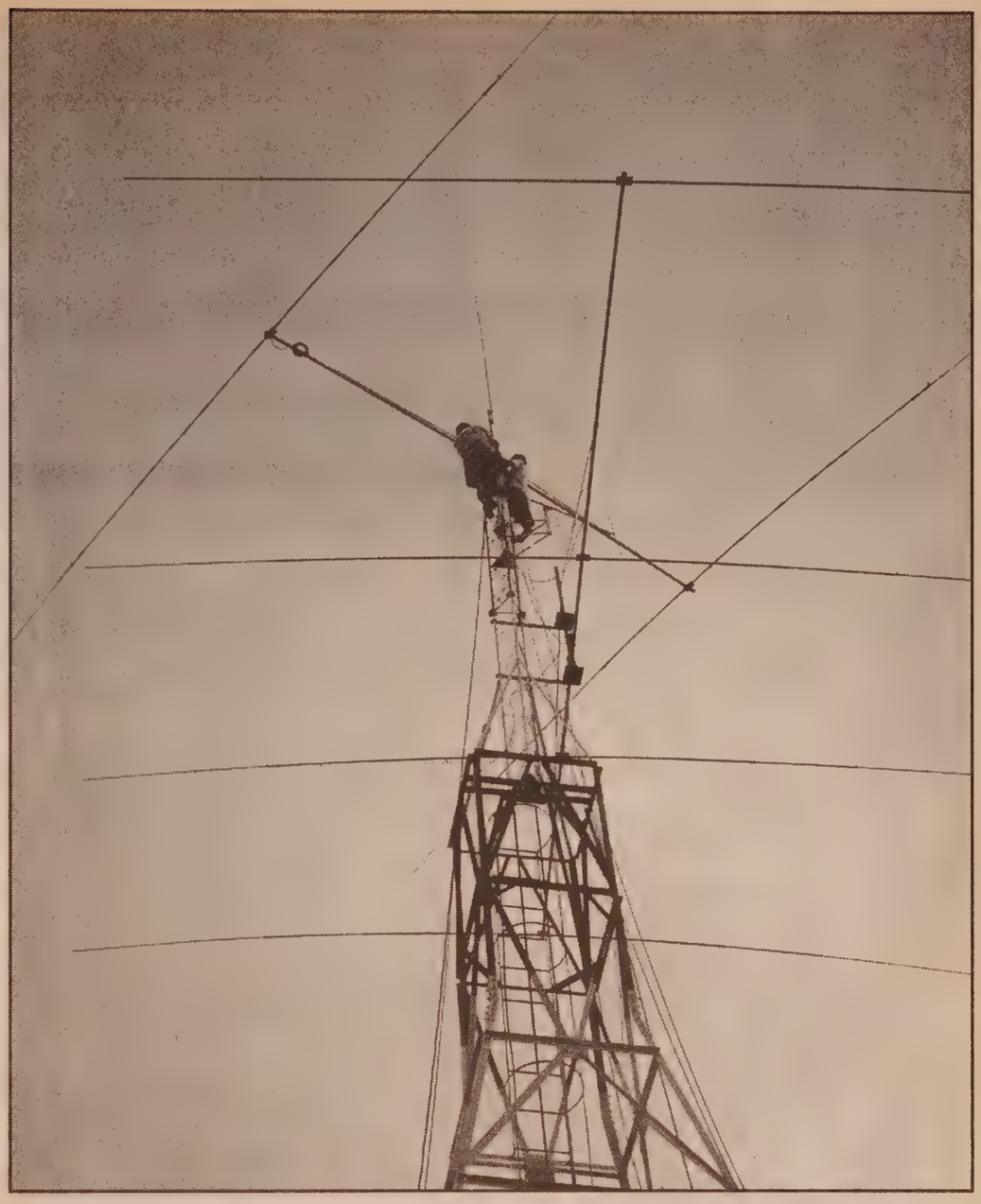
a small navy base was built on reclaimed land. Next, the island was enlarged to accommodate a landing strip. When it was discovered that the diving on this atoll (2,000 meter wall diving) was so superb, a small diving facility was opened in the 1980s. Then, in the 1990s,the current facility was constructed including a full service hotel facility, PADI dive center, and swimming pool.

After a standard orientation meeting with a resort manager, we asked if we could use the resort's conference room for our operation. We were quickly obliged and all of our gear was then moved there. The conference room is a large meeting hall which is rarely used on the island. It is located far away from the sleeping quarters; excellent for our needs as we didn't want to disturb any of the other resort patrons. This was off-season. Actually, it was the first time the resort was opened past the end of October! There were only a handful of other paying customers on the island. We almost had the entire island to ourselves! Well, us and about 30 staff members, all of whom were busy painting all of the resort's wooden structures in between their normal duties!

The air conditioning was turned on in the conference room and we went for breakfast while the room cooled down. Upon return, we found it fairly comfortable inside while outside, it was scorchingly hot! The room was so large that we were able to build all of the antennas inside in air conditioned comfort! We selected antenna sites based on our available coax lengths. We decided to place our antennas; a Mini33, an A3W, and a Force 12-C3 side by side as far apart as we could. A 6-meter beam would go up on the opposite end of the building. A Butternut HF9V would be placed in the rocks along the lagoon. Our low band antenna was planned to be a kite vertical. But, upon arrival, we discovered two, 40-foot long pieces of bamboo laying on the rocks. These were left behind by a previous DXpedition back in early 1998 and they were still in good shape. So, we decided to use them to erect a 160-meter inverted L. Everyone went to work and we decided not to go on the air until everything was up and functional. The teamwork was fabulous. By around 5:00 p.m. we were up and ready to go. It was decided to have Jani, YBØUS, make the first QSO, which was with JF2KOZ on 18 MHz SSB. We gave this honor to Jani mainly due to all the hard work he did to make this DXpedition happen!

On the air

Thus began a seven-day operation from the Spratly Islands as 9M6OO. We divided into two three-man teams and set up a 24 hour operating schedule which was made to accommodate the meal schedule on the island. We had seven shifts per day. Five were 3-1/2 hours long. One was



Our first big challenge was removing a beam antenna from Hillview Gardens' tower to use on Layang-Layang.

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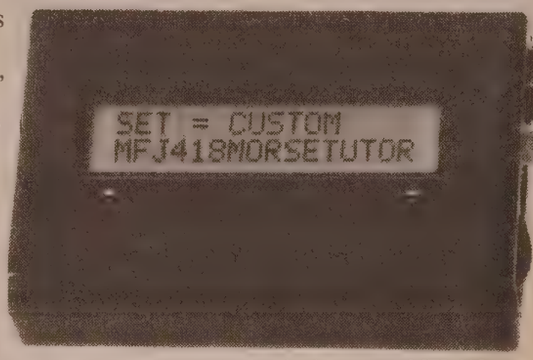

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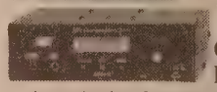

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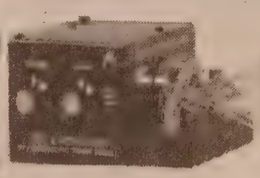

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2-1/2 hours long. One was four hours long. Having an odd number of shifts made it so that everyone was on a different set of shifts every day giving each operator an equal chance at operating during prime times. These shifts were scheduled so that they began half way through any meal (five scheduled meals each day). No one would miss a meal. Each station was assigned a color corresponding to the color of the floppy diskettes used for the savelog for that station. Although we assigned people to specific stations on each shift, it was left to each team to re-arrange that schedule as they saw fit.

Flexibility was the rule! All antenna feedlines could reach any of the four stations and often, coax would be re-run across the floor to optimize operating conditions. For the most part, we adhered to the schedule. If someone was bored and couldn't sleep, there was always a fourth rig available. Usually it was either on 6 Meters or RTTY. We had some awesome CW pileups on 6 Meters to Japan which were a lot of fun!

We watched our statistics and tried to hit different bands on CW and SSB as much as possible. It was a challenge to work SSB since our team was primarily a CW team. Our totals prove that, as CW beat SSB by about 2 to 1. The primary goal for this DXpedition was to hit the WARC bands and the higher HF bands hard, and we did just that, trying to capitalize on openings on 10 and 12 Meters as much as we could. One memorable QSO was with a mobile station in Rhode Island! Our goal was 20,000 QSOs and the final total from 9M6OO was 20,724 QSOs. We were quite happy with the results.

On the afternoon of 17 November we began dismantling the antennas and some of the radios. We left the mini33 up for the final night. At daybreak, we dismantled the final station and boarded the plane for the 8:00 a.m. flight back to Kota Kinabalu.

Bill, N2WB, caught an afternoon flight for home. Mike, N6MZ and Tom, N4XP, decided to skip the Brunei portion of this DXpedition and were able to get their flights rescheduled. Alfons, Doris and Phil, 9M6CT met us at the airport. Meanwhile, Jim, K8MR, had arrived from the U.S. at 2:30 a.m. that morning, so the rest of us went to wake him up at his hotel! Jim would join us for the remainder of the DXpedition. We were all whisked away to a Chinese 'dim-sum' breakfast where we celebrated our successful operation over some great food!

SEANET Convention-Brunei

Our next adventure was to be the 27th Annual SEANET Convention being held in Brunei. SEANET or the South East Asia Network is a daily controlled radio network set up by licensed Amateur Radio operators to enable contacts, exchanges of information, passage of urgent, emergency, or medical traffic within the region.

(http://www.geocities.com/Area51/Hollow/4283/seanet.html)

After catching up on e-mail at a local internet cafe', we (N2OO, N4PN, YBØUS and K8MR) headed for the airport. Our "Brunei bound" group also included several local 9M6 amateurs who were also attending the convention. The short flight was quite rocky, but 25 minutes later we landed at Bandar Seri Begawan, Brunei safe and sound! Hassan, V85HG was at the airport to greet us and he whisked us all off to the convention hotel in chartered buses.

Once checked in, we were escorted away to a local restaurant for dinner. Then, after returning to the hotel, we visited the SEANET Convention special event station V8SEA set up in a room on the 7th floor and promptly logged some QSOs, as if we hadn't had enough yet!

Paul, N4PN, kept saying throughout the trip that he just wanted to make "one more QSO."

So he did... and he did, and he did. But, the long day started to take its toll on us and it was great to crawl under the covers

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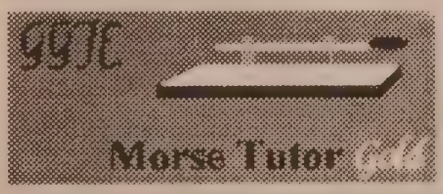

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for a good night's sleep.

Friday was to be a casual day. We all registered for the convention first thing. Everyone was issued a special SEANET Convention shirt! We got a chance to do some shopping in town and see a little of Brunei. Then, in the afternoon, we went to visit Bill, V85AA, who had agreed to let us operate from his house for a few days after the convention was over. So, we brought my IC706MKII over, along with some accessories and had a nice visit with Bill and his lovely XYL Lita before heading back to the hotel to get ready for the reception/hospitality suite that evening. Up on the 8th floor of the hotel, there was a large room with a wonderful spread of food. Most of the convention attendees were there and it was a wonderful social affair indeed! Lot's of picture taking and countless handshakes! My personal highlight was meeting Tim Chen, BV2A, for the first time! Tim was the only amateur in Taiwan for many years and he was my first BV QSO. It was like we were old buddies! Ahh, the wonder of Amateur Radio!

Saturday at the Convention was to be a very busy day! Right after breakfast, all convention participants traveled in four buses downtown to where a professional group photograph was taken in front of a beautiful mosque. Then we were off to see the entrance to the Sultan's palace; the largest residential palace in the world with over 1,400 rooms! Can you imagine that? Next, we headed for the Brunei Museum where we were able to learn a lot about the history of Brunei. Then, we went to town for lunch at a restaurant right on the Brunei River with a fabulous view of Kampong Ayer — a water village with a population of 30,000! The river was constantly busy with water taxis speeding back and forth between town and the village. During lunch, we were surprised by the arrival of Alan Kan, ZL1TX. Alan is a very old friend going back to 1979 and the 1S1DX Spratly DXpedition of which I was a team member. At that time, Alan lived in Brunei and was VS5TX. He had helped us with much of our local needs for that DXpedition team. He also was responsible for introducing me to Alfons when we held our first DXpedition to 9M6 land in 1980 (9M6MU). This was Alan's first visit to Brunei since he moved away 17 years ago.

We had about two hours free time to wander around Brunei's largest city, Bandar Seri Begawan, visiting an internet cafe', many shops and a local outdoor food market. Alan and I had a chance to do some "catching up." But, alas, it was time to head back for the buses so we could get ready for the Gala Banquet that evening!

The "Gala Banquet!"

Wow! What can I say? We were just getting comfortable at our table before the banquet began when I was asked by Hassan, V85HG if I would be willing to represent the USA on the reception line being set up to welcome the Prince!

The Sultan of Brunei was out of the country, so the Sultan's brother, His Royal Highness Prince Haji Sufri Bolkiah, who is the Deputy Sultan, was to be the honored guest! You knew something big was going to happen when a crew arrived to roll out a very long red carpet through the hotel lobby. Then, several 'security' people arrived and positioned themselves around the lobby. I was standing on the reception line along with one Ham from each of 14 other countries represented at the SEANET convention.

Meanwhile, Jim, K8MR, was whisked up to the V8SEA Ham shack on the 7th floor to prepare a demonstration of Ham radio for the Prince. Finally, after a short wait, a car arrived and several more security people fanned out around the lobby before the Prince came in to greet us. One by one, we were each introduced to the Prince by Hassan, V85HG.

The Prince then proceeded to the elevator where he went to see the Ham shack on the 7th floor. After a short demonstration by Jim, he proceed back down to the waiting crowd in the banquet room on the second floor where a formal opening ceremony was held. The Prince declared the 27th Annual SEANET Convention officially open.

Throughout the evening, we were entertained by a wonderful cultural group of

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His Royal Highness, Prince Haji Sufri Bolkiah shakes hands with the semi-official representative from the U.S., Bob Schenk, N2OO.

musicians and dancers. The food was nothing short of fabulous, with a huge buffet of local dishes! After dinner, each country's delegation went on the stage to give a short presentation, usually a short speech and then a "sing-a-long" song representative of their country. This being my first SEANET Convention, I was unaware of the 'ritual' of singing a song! Ohhhh no! Me, sing? Now, that would not be a pleasant experience. Maybe if I had known, we could have sang a chorus of "She'll Be Coming Around The Mountain" or something but NEVER without at least a little preparation! So, after explaining that we had no talent, except on CW, I gave a short impromptu speech with my two-person delegation (N4PN and K8MR) in tow.

After the Prince left, the partying continued until the wee hours of the morning. Bear in mind that all this "happiness" was happening without the aid of alcohol!

You see, Brunei does not allow alcohol except for a strict minimum amount that a tourist is allowed to bring in with him. Consumption is restricted to the hotel rooms.

After breakfast on Sunday, it was time to bid old and new friends farewell. Most were heading for home, although there was a modest contingent who followed Alfons and Doris over to Hillview Gardens for a few days. Jani, YBØUS, decided to go to Hillview to help put the hamshack back together since we had borrowed some of the Hillview gear for our Spratly operation.

I had made arrangements for us to operate from my old friend Bill Maddox's home for three days. I was honored to have my old "vintage" V85OO license renewed! V85 calls are not issued any more as the local telekoms now only issues V8xxx licenses (ie V8USA... no more #5 in the calls).

We set up an IC706MKII barefoot in Bill's dining room and we also used his main upstairs shack consisting of a JRC transceiver and amp. Bill's antenna farm is fairly impressive! At about 85 feet is a Hy-Gain 5-element 15-meter beam and at about 70 feet, the old 204BA (20-meter monobander) left by the 1979 1S1DX team! All other antennas were an assortment of wires. For the next three days, we proceeded to put on a predominantly CW operation from Brunei as V85OO, hitting the WARC bands pretty hard. We ended up making about 6,000 QSOs!

On Wednesday, after some emotional goodbyes, we (N2OO, N4PN and K8MR) departed Brunei and headed back to Kota Kinabalu. Jani was at the airport to greet us and drive us to Hillview. After a pleasant ride through the beautiful countryside of central Borneo, we arrived at Hillview in mid-afternoon. It was time to prepare for the CQWW-CW Contest from 9M6AAC. Jani had already re-assembled the shack and many of the group from the SEANET Convention were still there. After a good night's rest (and some pileup running from 9M6AAC) we started to plan the strategy for the contest.

But, first it was time to pause for our Thanksgiving Day celebration! That's right!

Thursday was Thanksgiving Day! Alfons and Doris even provided us with a traditional turkey dinner, Malaysian style of course! After Paul, N4PN, said the blessings, we all chowed down! I've never had a Thanksgiving dinner before with turkey and satay! The turkey was baked in a pit under charcoal and the stuffing was made with carrots and ginger! It was all uniquely wonderful!

On Thanksgiving evening, I decided to check out 20 Meters before hitting the sack. After calling CQ for awhile, I was surprised to find the band wide open to the northeast USA!

But, only a handful of people were calling! It was a little strange because the few who did call were quite strong! I asked one of the callers to call my XYL Beth (KF2BQ) who was at her parent's house in New Jersey, and ask her to get on the air! Her parents are also Hams; N2IRM and KB2EVF. I was sure that their rotary dipole and 100 watt rig would make it. Sure enough, after a short wait, Beth calls! She is about S8. Not bad! After a few minutes of catching up,

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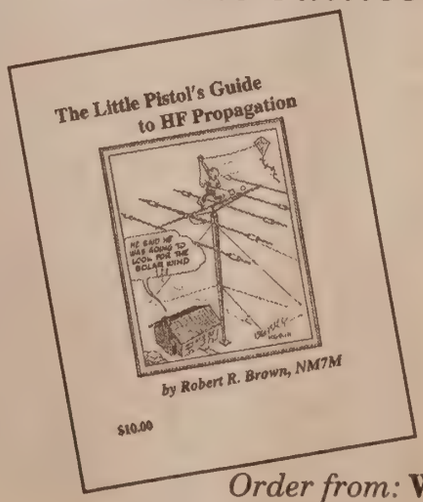

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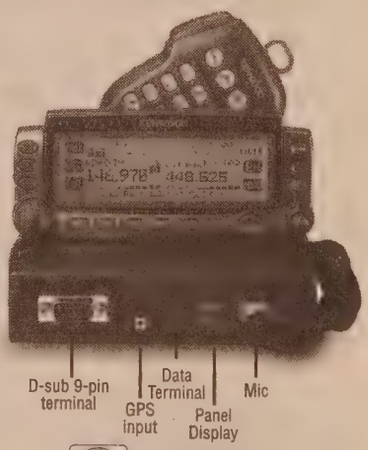

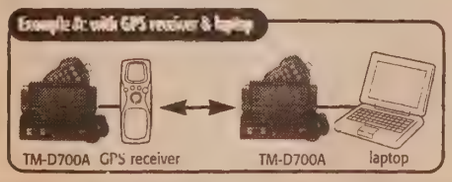

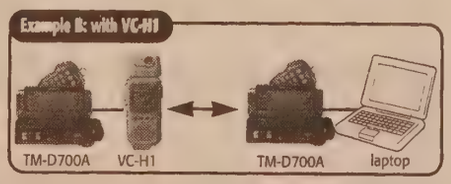

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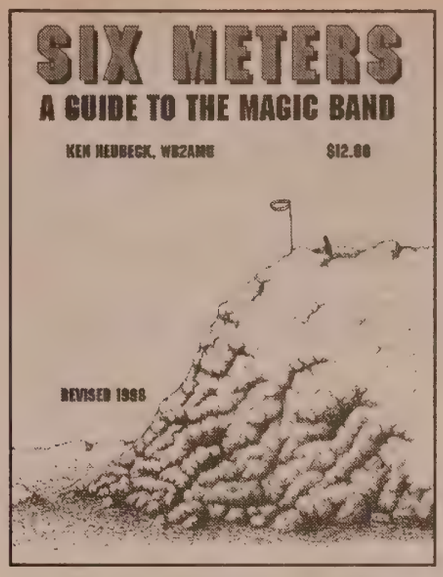

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I started to hear a few impatient stations calling over her. I asked everyone to please stand by explaining that it was Thanksgiving and I wanted to talk with "the lady who allows me to go on these trips once in awhile!" I further declared "You should all thank her!" With that, I stood by and listened to one of the most amazing things I have ever heard in all my DXpeditioning years! A pileup of "Thank You's" from all over the world — hundreds of them! And Beth could hear them all as well! It was an unrehearsed, unplanned, spontaneous "moment" that we will never forget! Thanks guys!

On Friday, we removed the A3 beam from the second tower at Hillviewaffectionately called the Rafflesia tower (the rafflessia is the world's largest flower and it is found in the area around Hillview). Next, we built the C3 and put it in the A3's place.

Then we had to rebuild the A3 and erect it on a temporary mast for the contest multiplier radio. We made a 160-meter inverted vee and hung it from the big tower. We then built the

HF9V vertical, mounted it and ran radials in a field behind the shack. We were finally ready.

Our last team members arrived on Friday after a "struggle" with airline schedules! Peter, G4MJS, and Stephen, G4SHF, arrived by taxi and were immediately put to work on helping to erect the last antennas. Stephen is not a CW contester, so Jani put together a 6-meter station for him. A 5 element 6-meter beam donated to Hillview by our team was temporarily erected on a 15 foot portable mast in front of the shack. Next, palm prints were made and trees were planted by K8MR, G4MJS and G4SHF. A very busy day indeed!

Let the contest begin!

Being 8 hours ahead of UTC, it is a bit strange to actually start a contest in the morning at 8:00 a.m.! But, it is a welcome concept to actually wake up refreshed and be ready to contest! After a hearty breakfast, Jim, K8MR, settled in on the run station on 10 Meters. Paul, N4PN, settled in on the multiplier radio. Peter, G4MJS, settled in on the web cluster. Jani and I had planned to fill in where needed, deferring to the avid contesters on the team.

I did do several stints on the multiplier radio as well as a four hour stint on 10-meter CW on the run station Sunday morning, giving the mainstay ops a well deserved rest!

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Jani also did some spotting. But, otherwise, most of the operating was done by Jim, Paul and Peter. 48 hours later, we had around 4,800 QSO's in the log. Not a record, but a respectable entry indeed.

The contest ended at 8:00 a.m. on Monday morning — also a bit unusual! Jim, K8MR, and I had a flight that afternoon and Paul, N4PN, had a flight the next morning so, after a relaxed morning breakfast we headed to the local town of Keningau for a bit of shopping before leaving for Kota Kinabalu and the airport for our trips home. Peter, G4MJS, and Stephen, G4SHF, didn't have to leave right away, so they stayed at Hillview for another day and used their own call 9M6RIT, making another 1,000 QSOs!

Thus ended a most unusual, successful and rewarding DXpedition. It involved nine operators, three DXCC entities, five venues, and resulted in some 35,000 QSO's! One of the goals of our DXpedition was to leave an antenna package in Sabah, which would be made available for future operations, especially from Layang-Layang Island. With the very generous assistance of the International DX Association and the Southeastern DX Club, we were able to do just that. A set of antennas is now in storage at Hillview Gardens.

I must not neglect to list our primary sponsors, without whom this DXpedition would not have happened. INDEXA, SEDXC, Old Barney ARC, NODXA, GDXF, Kermadec DXA, Florida DXG, ULLI QSL Cards, CT by K1EA, LogEQF, Butternut, Heilsound, Cushcraft, Malaysian Airlines, Astron Corp, International Antenna Corp, Windchasers Kite Shop, Battlecreek Low Band Group, GeoClock, Hillview Gardens Resort, 9M6MU, 9W6DU, 9M6CT, 9M6MX, Layang-Layang Island Resort, V85AA, V85LM, the 1999 SEANET Convention committee and the many individuals who gave advance contributions and assistance — thank you. But, a sincere thanks to everyone who worked us. These were some of the most well mannered pileups I've ever heard! It was indeed a fun, and rewarding experience!

See ya' in the pileups — next time!

New RAC Ontario Assistant Director

Allan Boyd, VE3AJB of Little Current, Manitoulin Island, is the Radio Amateurs Canada's newest Ontario North Assistant Director. An Advanced license holder, Boyd was licensed in 1986 and is currently the President of the Manitoulin ARC. He is also an Accredited Examiner for Industry Canada for the Amateur and marine spectrum. Boyd is the 10th Assistant Director of the Ontario North area. — *RAC, Newsline*

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New DXCC Country!

Armond Noble, N6WR

There's nothing more exciting in DX than "A New Country". Chesterfield Island, TXØDX came on the air at 0000z 23 March 2000. The island, separated far enough from New Caledonia to count as "a new one' is at 19 degrees, 52 minutes South and 158 degrees, 19 minutes East.

A group of outstanding operators including the "New Country" champion, with 10 to his credit, Martii Laine, OH2BH, handled the pileup pandemonium with panache. Even the 100W to a vertical stations were able to get TXØDX into their logs in the first few hours of operation.

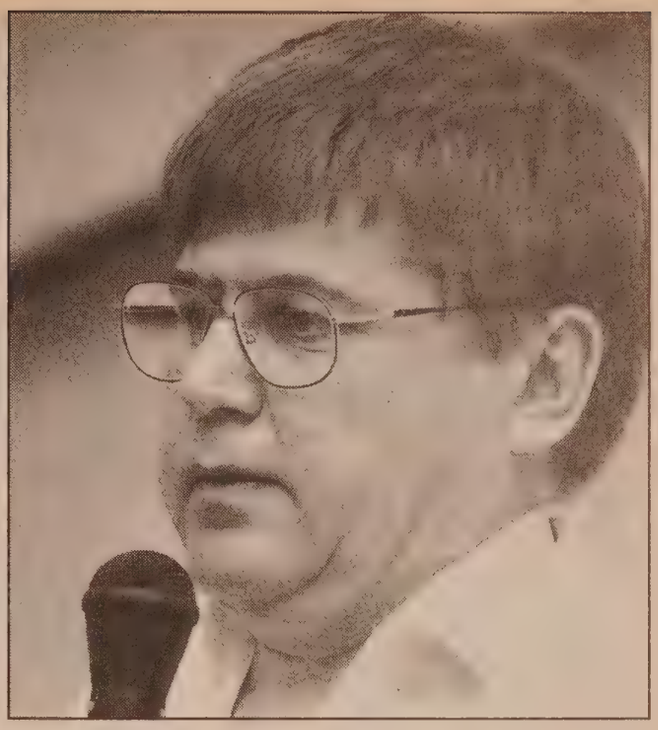
QSL cards for HF contacts will go to: OH2BN, Jarmo Jaakola, Kiiletie 5C30, Helsinki 00710, Finland.

For 6M contacts QSL cards go to JA1BK, Kan Mizoguchi, 5-3 Sakuragaoka 4 Chome, Tama-City, Tokyo 206-0013, Japan.

Yaesu is, as they have been for many other DXpeditions, a major sponsor of the TXØDX effort. IOTA chasers will log this one as OC-176.

Other operators, sitting in a tents under the hot sun, are Pertti Turunen, OH2RF; Kari Leino, OH2BC; Pekka Kolehmainen, OH1RY; Eric Esposito, FK8GM; Franck Petitjean, FK8HC; Kan Mizoguchi, JA1BK; Trey Garlough, N5KO, and Wayne Mills, N7NG.

Biographies of the intrepid can be found at http://www.n4gn.com/tx0dx/bios.html The CW and SSB positions on Chesterfield Island were 1,000 feet apart and by using FT-1000MP transceivers the operators were able to operate both SSB and CW on the same band at the same time.



Martti Laine, OH2BH, consumate DXpeditioner was one of the many operators at TXØDX.

An exciting time filled the HF bands thanks to the courageous crew on the island and assistance from a great number of supporters.

TXØDX on the air
—but not on the list

As promised, the Chesterfield Islands TXØDX DXpedition debuted on the bands 23 March. And while the Islands' DXCC status is pending, the advice from the experts is: "Work 'em now, worry later!"

TXØDX already has overcome at least one hurdle on its way to becoming an official DXCC "entity." The International Amateur Radio Union has accepted the Association des Radio Amateurs de Nouvelle Caledonie (ARANC), the Amateur Radio Association of New Caledonia, as an IARU member society. A letter to that effect was faxed 23 March to ARANC President Jean Phillippe Torregrossa, FK8FK, by IARU Secretary David Sumner, K1ZZ.

ARRL Membership Services Manager Bill Kennamer, K5NX, says the Chesterfield Islands, located in the Coral Sea, now are "potentially eligible" as a DXCC entity because of their separation from New Caledonia — 350 km away. The ARRL DX Advisory Committee and the ARRL Awards Committee still must vote to approve Chesterfield Islands as a DXCC entity. Kennamer says he's not sure when those votes might occur but thinks the DXAC vote could be "fairly soon."

TXØDX kicked off activity on 15-meter CW and SSB, as well as on 17-meter SSB, and 10-meter CW, working split. Pileups were described as bedlam. Using Yaesu FT-1000MP transceivers, the team was to be able to operate CW and SSB simultaneously on the same band.

QSLs for TXØDX (and for TX8CI) HF contacts go to Jarmo J. Jaakola, OH2BN, Kiilletie 5C30, Helsinki 00710 FINLAND; TXØDX QSLs for 50 MHz QSOs only will be handled by Kan Mizoguchi, JA1BK, 5-3 Sakuragaoka 4 Chome, Tama-City, Tokyo 206-0013 JAPAN.

Operations ended 30 March. More information is available at the TXØDX Web site http://www.n4gn.com/tx0dx/ throughout the operation. — *ARRL Letter*

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Inside Amateur Radio

The following story has been excerpted from Inside Amateur Radio, *by the late Lenore Jensen, W6NAZ. The book can be purchased from Worldradio Books, P.O. Box 189490, Sacramento, CA 95818. Price is $9.00 plus $2.00 shipping and handling. CA residents please add 70¢ sales tax.*

Good-bye

It was the summer of 1965 and dozens of B-52 bombers from bases in Louisiana and California arrived at Guam Island to support the Viet-Nam effort. Many of these crews were surprised to be there.

At their home bases, they were accustomed to "Delta" Red Alerts where they would, upon Klaxon horn alarms, taxi to the end of the runway only to be recalled to the original alert position. Imagine their surprise when they became airborne and discovered their destination to be Guam, Mariana Islands.

Stateside, Amateur Radio operator Lou Hoekstra, W1TRB, had been frequently contacting KG6FAE, at Andersen AFB, Guam. here's his story:

"When the crew members landed, many had nothing in their possession but the clothes they were wearing. At that time, there was no transpacific cable for telephoning back to the States and the commercial radio circuits were overloaded. So the alternative was the local Amateur Radio station which was handling hundreds of calls to wives, mothers and girlfriends in Shreveport and Sacramento. By radio across the ocean and a 'patch' to a telephone call, we were able to let them talk. After the initial surprise, the talk would get down to 'send me underwear, jeans, golf clubs, camera and money!'

"The radio shack on Guam was always filled with B-52 crew members and support troops wanting to talk to their loved ones back home, with conversations revolving around children, pets, weather, cars — and of course their love for each other. Comments about the war effort were not allowed.

"I still recall one series of phone patches that seemed fairly routine at the time. Even more than 33 years later. One crew consisting of eight men, while on Red Alert, were over there waiting their turn to call home. Again, most of the conversation centered around love and counting the days until they next would meet.

"Although the calls for this one crew lasted about one hour, much of the time was spent with the Master Sergeant, a tailgunner, and his wife trying to patch up their differences. The man and his wife were having a domestic squabble and she threatened to leave him. Now, we Ham operators are not supposed to get involved with the calls, but the operator at KG5FAE diplomatically managed to get them to end their call with a reinforced love for each other.

"Later that day, a number of B-52s were deployed to Viet-Nam to drop their bomb loads on suspected enemy concentrations. Enroute, two of the planes collided over the South China Sea near the Philippines during a refueling operation, resulting in the death of all crew members, including the tailgunner. Little did I know at the time of the phone patch that several hours later all eight of the 'I love yous' and 'Good-byes' were the last words to be exchanged by these loved ones."

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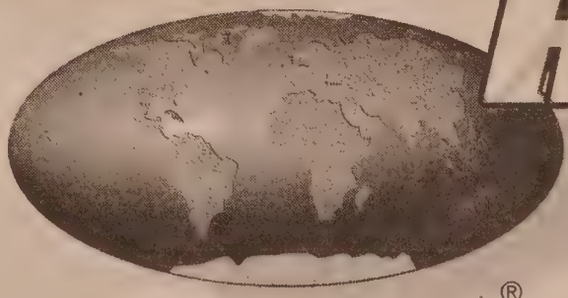

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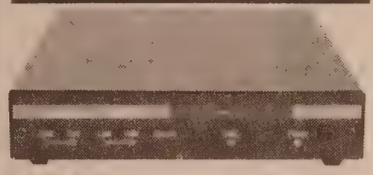

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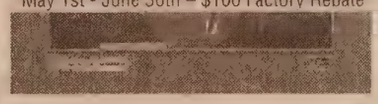

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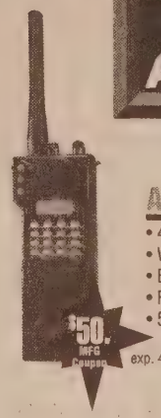

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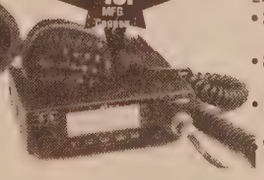

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BOB DAVIS, K7IY

ARRL Nevada Section Manager Robert J. "Bob" Davis, K7IY, of Reno died 24 February after reportedly suffering a heart attack. He had served as Nevada's SM since July 1997. Prior to that, he served for two years as an Assistant SM. — *W6OLD, ARRL Letter*

DOUGLAS J. TERMAN, N1KQI

Best-selling author Douglas Terman, N1KQI, of Warren, Vermont, died 28 December 1999. He was 66. An Air Force veteran who worked in intelligence and flew jet interceptors, Terman took up writing after moving to Vermont in the 1970s. His techno-thriller genre novels include First Strike and Free Flight, both best sellers. He also wrote a children's book, By Balloon to the Sahara. — *W1AIM, ARRL Letter*

SHERMAN C. CARR, W9NGT

The man credited with being the father of SKYWARN — Sherman Carr, W9NGT, of Hartford, Wisconsin, died 15 March.

Begun more than 30 years ago, SKYWARN is a cooperative effort through which real-time weather information is relayed via Amateur Radio to NWS offices during severe weather conditions. Carr was Wisconsin Section Emergency Coordinator in the late 1960s when he established the first Amateur Radio weather-spotting network, the Weather Amateur Radio Network, WARN, with assistance from Dave Theophilus, W9KWQ, a NWS meteorologist in Milwaukee. In those largely pre-repeater days, the network operated on 75 Meters. Carr's idea worked so well that other states adopted its basic structure, which eventually was implemented as SKYWARN.

Last June, the National Weather Service honored Carr for his role in helping to create the SKYWARN program by presenting him with its Central Region Special Service Award. Wisconsin's current SEC Stan Kaplan, WB9RQR, called Carr "as much a pioneer as the first astronaut."

"Carr leaves a legacy of creativity, incredible dedication and innovation in emergency communications, in technical excellence, and thousands of friends who will remember his chuckle and his grin," said Wisconsin ARRL Public Information Officer Jim Romelfanger, K9ZZ. — *K9ZZ, ARRL Letter*

HARRY MEAD, VK4DHM

One of Amateur Radio's prolific DXpeditioners, Harry Mead, VK4DHM died 23 December 1999. Harry had done several DXpeditions in his Amateur Radio career, including journeys to the Spratly Islands, Tokelau, Mellish Reef and to Cocos Keeling. His last trip was to Mellish Reef in 1993. Harry operated using calls familiar to all DXers, including VK9CT.

In his later years, Harry was on the ANZA net, but still remained an active member of Oceania DX Group.

Bill Horner, VK4FW, president of ODXG has Harry's logs and anyone waiting for a QSL card will be getting one when Bill is able to go through the logs. — VK4FW

RICHARD W. KOWITZ, W8RCM

A well-known W8-land amateur, DXCC Honor Roll member and WAS card checker, Dick Kowitz, W8RCM, of Dearborn, Michigan, died 06 January 6. He had been battling cancer. Kowitz had confirmed more than 335 DXCC entities. W8RCM was an active member of the Motor City Radio Club since being licensed in 1937 and was known as the antenna specialist as well as a VE and mentor. — *K8AE, ARRL Letter*

JOE WALSH, KB2LHI

Joseph M. "Joe" Walsh, KB2LHI, of Parsippany, New Jersey, died 28 February in Port St Lucie, Florida. A retired officer with the Morris County Sheriff's Office, Walsh (not to be confused with rock singer Joe Walsh, WB6ACU) was renowned as "the world's fastest shooter" and was said to be listed in the Guiness Book of World Records. — *N2OPO, The Hudson Loop, ARRL Letter*

Clearwire withdraws spread spectrum petition

Clearwire Technologies makes high-speed wireless Internet and network access devices that operate at 2.4 GHz where there's an amateur allocation. Fearing possible amateur interference with its Part 15 products, Clearwire submitted a Petition, asking the FCC to reconsider parts of its Report and Order dealing with spread spectrum communications. Those new rules, issued last summer, took effect 01 Nov. 1999. But now, Clearwire has withdrawn its Petition. The company says it reserves its position that it's entitled to seek protection from an amateur station that operates unlawfully.

Opposition from the ARRL called the company's petition frivilous. None of Clearwire's requests were reasonable and suggested the company had no standing to propose what it called burdensome restrictions on amateurs. The ARRL noted Commission rules don't afford Part 15 devices any protection from interference from licensed services such as Amateur Radio.

Disagreeing with the ARRL's stance, Clearwire pointed out in its withdrawal letter that while Part 15 devices must accept interference from "authorized" radio stations, "Clearwire does not waive its right to seek relief from unlawful amateur operation in the future."

Most communications industry watchers believe that Clearwire never had any legal ground for its reconsideration request in the first place. — *ARRL, Newsline*

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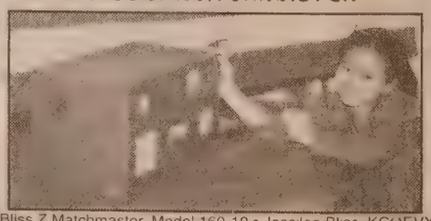

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3. All contacts must be with land-based stations. Contacts with ships, at anchor or otherwise, and aircraft cannot be considered.

4. All contacts shall be made from the same country.

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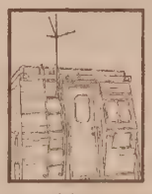
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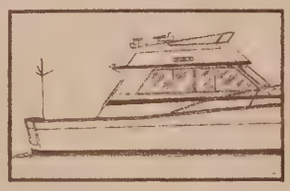

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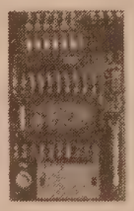
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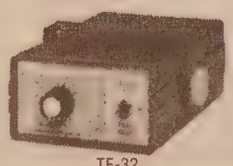
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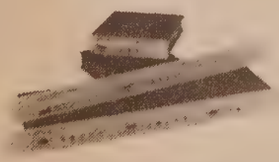
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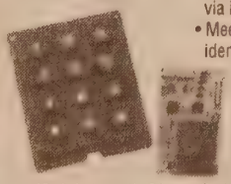
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Chip Weems, W4PBG

Today I operate many modes both analog and digital from 160 Meters to 70cm. There are two computers — one for satellite tracking and one for digital stuff. The black shelf boxes are designed so that I can move them around and change things easily. The layout allows me to maintain a circle of vision for all panels and monitors from a swivel of the desk chair. (Age has reduced the field of vision). Working the satellites and keeping the satellite antenna elevation and azimuth adjusted while operating the old hand key requires a contortionist or a careful layout. It is not highly competitive in any one mode, but is adequate and lots of fun on many of the modes and bands Amateur Radio has to offer today. The challenge is keeping up with the application of new technology to Amateur Radio.

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The ghostly QSO or ... Where'd ya go?

George Fullerton, WB2IIV

In late January 1964, while I was a Novice, I received a QSL card from New Jersey. It confirmed a contact on 144 MC for 12 September 1963. My report was 5/4 for a 2-meter AM contact. An operator note on the card said "he lost me."

The really strange part about this QSO is even though I had a license, I never had a rig until Spring of 1964. "Murphy" must have visited New Jersey on 12 September 1963 or maybe someone had a super imagination. Air miles between our stations is about 155 miles.

In answer to a query I mailed to the station I received a note to the effect that he neither had my name or QTH recorded in his log, and wasn't really sure of my call sign. Case closed.

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Letters to the Editor

Ashamed...

I would hope that WA3VJB, Paul's inability to strike up a conversation on 2 Meters does not really stem from his efforts to "correct" the Hams on his local "machines." If not, maybe "Friendship, PA" is an oxymoron. I've traveled extensively coast-to-coast with a mag-mount and a 2-meter HT and never encountered the kind of anti-social, Ham cliques he reports. Frankly, he sounds like an occasional visitor on VHF from the HF bands who is simply unwilling to learn a "new" pattern. Face it, if you say, "CQ" on VHF/UHF repeaters you are risking labeling yourself at least a "newbie" if not a "lid." Just as on VHF/UHF we seldom say "over" either. Don't have to — the squelch-tail does it for us. And, if you want "in" on an on-going QSO on VHF/UHF, don't say, "break." The all but universal protocol is to wait for a break and then "drop" your call sign once. The wait until someone acknowledges you.

Like most Hams I suppose, I have vanishingly small patience with "guardhouse lawyering" regarding the Rules and Regulations. His construing "monitoring" or "listening" as "illegal broadcasting" is simply balderdash! Those expressions merely announce the status of ones station as "QRV" rather than "QRT." By his line of reasoning, signing "clear" or "QRT" after the Ham you're working has gone SK would be "broadcasting" because if your contact is no longer there, then, ipso facto, you are making a "non-directed call." That's rubbish. His reasoning would also put announcements and QSTs beyond the pale, which clearly they are not.

Let's get real. The prohibition against "boradcasting" has two principal aims — totally unrelated to "signing." First to avoid competition with the broadcast industry, itself. And, secondly, to avoid long-winded monologs on one person's hobby-horse" from tying up the frequencies to the annoyance and detriment of other Hams. The transparent subterfuges of, say, religious "conversations" with Ham collaborators in such evasions, certainly violate the spirit of that rule on the HF bands. But again, that has nothing to do with signing.

Dave Tyler, N7DRT
Sequim, WA

I thought it odd when K5ZTY or Houston took offense at the article by "Jimmy K." This source is verifiable.

I have known everything he said to be true, U.S.-wide, including Houston, TX. I travel every month somewhere and witness the fact that many, if not most, repeaters are cliques and they get upset when an outsider uses them, even though it is an open repeater. Many times when I announce my presence on a strange repeater while traveling, I have been told, "If you want to talk to someone, call them by their call. Do not announce that you are passing through or monitoring" — even in my home town where we have eight repeaters that for the most part are unused, with maybe a total of 15 minutes key down time on all eight combined. Everyone listens but no one talks or answers to strangers passing through, much less conversing among themselves. I am not a newcomer — I've been licensed over 20 years, have an Extra Class license and serve as ARRL Section Manager. This is not something that is a new occurence. I have noticed it for over 20 years.

Charlie Royall, WB5T
ARRL Section Manager
San Angelo, TX

I have a problem with the third and fourth paragraph of WA3VJB's letter. A lot of us were taught (probably in the military) to "open" and "close" a station. A simple "N7VEX monitoring" seems innocuos enough, and it "opens" the station. I also seem to recall that "Q" and "Z" signals are not supposed to be used on voice circuits. What am I missing here? Doesn't "W6ABC monitoring" equal "W6ABC CQ?"

Ed Ryan, N7VEX
Peoria, AZ

(Ed. It's been many, many moons, but if I remember correctly, when our Coast Guard units were in refresher training with the Navy, they made us use really weird signals on tactical voice circuits. "Z" signals were sometimes used on these frequencies, but we never used "Q" signals. It really was a waste of time, because the people on the bridge were constantly calling us in the radio room and asking, "What are they talking about?" Plain language would have done a much better job.

"W6ABC monitoring" is NOT the same as calling "CQ." Merely saying you are on frequency is not the same as trying to make a random contact.)

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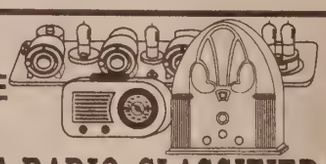

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Our March cover...

Boy, you guys have done it again! Just when I was sitting around bemoaning the fact there are too few of us left who remember, here you came with a front cover photo and an accompanying shot on page 18 of the old RCA-Radiomarine 4U shipboard radio telegraph console.

The memories flooded back to those hours sitting before just such an installation on the S.S. Steel Worker, KRRN in the early fifties trying to raise WCC or KPH on a daily basis from the Persian Gulf and points east.

What Rick McCusker, WF6O, failed to mention was the hash from the motor generator that made working on HF a rough go of it when WCC or KPH was about QSA 2-3. Nor did he mention these installations were generally mounted athwartships so the carriage on the typewriter hung up when the ship rolled. The operator had to perform a kind of packet operation, holding several words in the memory bank between the ears then spurt it out on the keyboard when the ship returned from its roll.

Those were the days, my friend, we cry to see their end.

George W. Morgan, Jr., W3MWY
Baltimore, MD

(Ed. Well, George, you were on a much bigger ship than I was. Every Coast Guard Cutter I was stationed on had fixed seats in the Radio Room — complete with seat belts! In heavy weather they were mandatory!)

Amateur Radio a man's world?

Occasionally we read or hear the comment; "Amateur Radio is a man's world." Anyone with that opinion has not been on the air in the northeast Washington and northern Idaho area. Tune anytime, especially on 2 Meters, and you will hear many YLs and XYLs. The number of man and wife Hams is amazing. Even an entire family of Hams is not unusual.

Those attributing this to there being nothing else to do in this area have not

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spent time here. I back up this statement by the fact so many come through as tourists and return to become residents.

Credit is due so many who volunteer to teach classes in preparation for license exams, do a good job as net managers and net control operators. Special thanks to these and those who set outstanding examples for the rest of us. I could make a list of those who fit this category, but the first to come to mind is Charlotte, AA7OX.

Bad operators are those who have not been given a helping hand.

Bill Burnette, W7UNE
Otis Orchards, WA

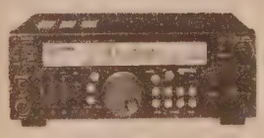
Restructuring...

Enough is enough is enough. What more can the FCC, the whiners and the big corporations do to Amateur Radio? First, they institute a "No Code" license, then they say if you have any kind of disability, you need not take the code. now they eliminate the higher code requirements, lessen the requirements for the Extra. I, along with KM6CQ (Worldradio, March 2000) am proud to be a "Native Extra." I received my Novice in 1965, at the age of 13. I upgraded to General in 1967, and reached the elite license in 1980. I had to take the 13 wpm exam, both receiving and sending before "Uncle Charlie." I wanted the license, so I studied. Not from a computer or tapes, but from the old Allied Radio 33-1/3 rpm record, as well as off the air with an old Hallicrafters. I have taught numerous code classes and always hear the same lame excuses. I'm too busy, I blah, blah during the week. You name it, I've heard it. Once there were no pre-printed questions and answers. You had to study, read, ask and study more. Back in the 1970's, Dick Bash published his answer books, and the ARRL and others had a fit about it. Now look what has become of the Bash Books. With all the available resources available today, computers, internet, clubs and the like, how can you not pass the easy test?

At present, the ARRL is petitioning the FCC to re-evaluate the Technician part. How about the Extra license? Why not keep this class as the top license, with all the privileges due it? The 20 wpm code coud be lowered, but not below 13 wpm. The written exam should be at least 75 questions. If you want the top license you should earn it. These same persons that want everything easy, why don't they approach the medical board, the legal board and the FAA and demand that the answers to their exams should be printed, and the test made easy so everyone can be a doctor, lawyer, pilot, etc. That would really make the world great. I have always been taught, if you really want something, go for it. Study your best, learn and you will succeed. Amateur Radio: SK.

Fred "Al" Wasielewski, WA2VJL
San Benito, TX

KENWOOD YAESU



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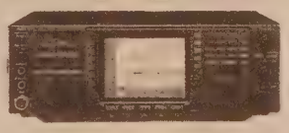

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Any suggestions for this annual gathering of the Good Guys and Gals who read ***Worldradio*** will recieve careful consideration from the ***WR*** Contest Committee.

Please send your suggestions to:
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Email your suggestions to us at:
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For complete rules see the *Worldradio* Website:

www.wr6wr.com

CATZ

The following deserving DXer has been awarded *Worldradio's* famous CATZ award:

19. James L. Young, KK4XL All CW 21 February 2000

Agalega Island (3B6)

The October 2000 DXpedition to Agalega Island (AF-001) is going according to plan. In March they acquired their licence and landing permission and a team member traveled to Agalega to make further preparation on the spot. The group plans around the clock operation with six stations on all bands 2 through 160 Meters. Satellite operation is also planned.

Consult their homepage for more information: www.agalega2000.ch.

Tromelin Island (FR/T)

Gil Gautier, F5NOD, Chairman of the Lyon DX Gang reports that the Summer 2000 DXpedition to Tromelin island will be very expensive, as they will have to hire a plane from Reunion Island and arrange a full setup for four operators for two weeks of operating.

Sometime during the month of August they plan for three stations on all bands, 6 through 160 Meters, using SSB, CW, and RTTY. They are looking for sponsors and association donations. Donations should be made payable to the Lyon DX Gang and sent to Eric Blanchard, F5PXT, 2, rue Bichat, Allae 32, F-69002 Lyon, FRANCE. It is also suggested for income tax deductions that Americans contribute through the NCDXF, indicating that the donation is for the DXpedition.

For further details check the web site at: http://perso.easynet.fr/~f5nod/.

East Kiribati (T32)

Active from East Kiribati is Chuck Corbett, T32NCC, located on remote Fanning Island (OC-084). Chuck is an American, who when not on the radio, is surfing. He says they have no telephones and mail comes in about five or six times a year. For QSL requests you must send your card direct as there is no bureau. His manager is HA1AG.

Almost all the other T32 stations are located on Christmas Island (OC-024).

Egypt (SU)

Don't forget the Giftun Island DXpedition by SU9DX this May and June. This will be a brand new IOTA reference when activated.

Mali (TZ)

The Daily DX reports that Larry Erwin, TZ6VV/KBØVV, and his wife, Trish, TZ6YL/KC5HDS, completed their 13-year era of DXing from Mali on 26 March and have returned to the United States, after making well over 75,000 QSOs.

QSL cards should be sent to Larry Erwin, KBØVV, 3850 Willomet Ave., Fort Worth, TX 76133. The Erwin's may be contacted by e-mail at <kb0vv@qsl.net>.

Pitcairn Island (VP6)

The Daily DX reports that Jukka Heikinheimo, VP6BR, lost his only amplifier in February because of voltage fluctuations. However, a replacement amplifier was located in New Zealand and shipped on the next available cargo ship. Any financial assistance would be appreciated. Please contact Olavi Veitola, OH5BR, via e-mail at oh5br@sral.fi for details.

Willis Island (VK9W)

A DXpedition to Willis Island (OC-007) is planned for May 2000 as noted in The Daily DX. This one is ranked as #47 in the League's 1999 Top 100 list.

The DXpedition team will leave Bowen, Queensland, on or about 2 May and expect to be operational by 6 May. Look for them on or near 3.504, 7.004, 10.104, 14.024, 18.074, 21.024, 24.894, 28.024 and 50.115 MHz on CW, and 3.790, 7.085, 14.195, 18.145, 21.295, 24.945, 28.480 and 50.115 MHz on SSB.

QSL requests may be sent direct to P.J. Garden, VK4APG, 58 Minerva Court, Eatons Hill, Brisbane, AUSTRALIA.

Laos (XW)

Hiroo Yonezawa, JA2EZD, has been active from Laos with XW2A, although his license is only good through to 05 May 2000. His length of stay is unknown and we don't know if his license will be renewed.

Myanmar (XZ)

The Central Arizona DX Association ended their XZØA operation at 2359 UTC, 06 February 2000 with over 79,784 contacts in the log. The split between operation on CW and SSB was nearly equal. Other modes, such as FM, PSK, SSTV, and RTTY, were also represented.

The QSL cards are presently being printed and all direct QSL requests should be addressed to: XZØA QSL Request, c/o Bob Myers, W1XT, 37875 North 10th Street, Phoenix, AZ 85086 USA.

Iraq (YI)

425 DX News reports that Peter Kristof, OM6TY, assigned with the Slovak Embassy, is now signing with YI9OM. He expects to be there for the next couple of years.

IOTA

Michael, DL1YMK, plans on visiting St. Lawrence Island (NA-040) between 03 and 11 July. He says that his main activity will be SSB on 15, 17 and 20 Meters, with some CW.

Barry Wakely, VO1BAR, who is in the Canadian Coast Guard, has been active from Surgeon Head Lighthouse, located on Exploits Island (NA-198). And, for those of you who chase Canadian islands, the reference number for that one is NF-052. Barry will be there until 08 May.

The Daily DX reports of another new IOTA coming on the air. Look for T88FW from Helen Reef and Sonsoral Island, between 27 April and 03 May 2000. The group is located south of Koror.

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validation material in January 2000:

AS-049	JI3DST/6	Tokara Archipelago	Jan 2000
AS-144	XZØA	Mergui Archipelago	Jan/Feb 2000
OC-152	FOØKOJ	Austral Islands	Oct 1999

The committee is still awaiting validation material as of early February for the following operations:

NA-064	AL7RB/P	Attu Island	Sept 1999
OC-114	FOØDEH	Austral Islands	Sept/Oct 1999
SA-032	XQ5BIB/8	Wellington Island	Jan 2000
SA-050	CE8/R3CA	Riesco Island	Jan 2000

The RSGB IOTA web site is now to be found on http://www.rsgbiota.org . Both this and the IOTA Manager's web site are being developed as and when time can be prised away from IOTA Directory revision and accompanying map-work.

The monthly selection of IOTA activity for February includes the following, but was not limited to:

AN-015	8J1RL	Ongul Island	22 Feb
AN-017	FT5YG	Petrels Island	01 Feb
AS-005	RAØBX	Dickson Island	11 Feb
AS-008	7K3EOP	Miyake Island	14 Feb
AS-012	JF6WTY/6	Amakusa Archipelago	12-13 Feb
AS-015	9M2TO	Pinang Island	03-29 Feb
AS-017	JR6SVW	Okinawa Island	24-27 Feb
AS-017	JS6PXB	Okinawa Island	10-15 Feb
AS-023	JE6EMW	Amani Archipelago	07 Feb
AS-024	JR6USF	Ishigaki Island	04-25 Feb
AS-026	HL4HLD	Cheju Island	05-12 Feb
AS-030	JD1BKR	Iwo Jima	05-29 Feb
AS-032	JA6CTW	Yaku Island	01-28 Feb
AS-032	JI3DST/6	Tanaga Island	27 Feb
AS-040	JH6TYD	Goto Island	01-29 Feb
AS-045	HL5FUA	Ullang Island	02-29 Feb
AS-053	HSØ/IK4MRH	Phuket Island	06-25 Feb
AS-056	JA6GXK	Danjo Islands	02-07 Feb
AS-083	RA9LI/9	Belyj Island	05-29 Feb
AS-103	BV9AAC	Penghu Island	08-11 Feb
AS-103	BV9AYA	Penghu Island	26 Feb
AS-117	JA4PXE/4	Kasado Island	06-13 Feb
AS-117	7L1MKM/1	Johgashima	27 Feb
AS-117	JK1FNN/1	Johgashima	27 Feb
AS-117	JA7QFU/Ø	Sado Island	04-08 Feb
AS-136	BD4ED	Chong Ming Island	04-25 Feb
AS-144	XZØA	Thahtay Kyun Island	01-06 Feb
EU-009	GMØHTT	Orkney Islands	06 Feb
EU-009	GM3IBU	Orkney Islands	22 Feb
EU-009	GM3POI	Orkney Islands	18-27 Feb
EU-010	MMØBJG	South Uist Island	27 Feb
EU-010	GM3JIJ	Isle of Lewis	18 Feb
EU-016	9A2GF	Brac Island	06-29 Feb
EU-016	9A4KF	Hvar Island	09 Feb
EU-016	9A3NY/P	Korcula Island	07-19 Feb
EU-029	OZ/DL2MX	Sjaelland Archipelago	06-08 Feb
EU-029	OZ1AA	Sjaelland Archipelago	20 Feb
EU-029	OZ5WQ	Lolland Island	20 Feb
EU-029	OZ8ABE	Zealand Island	27 Feb
EU-031	IC8JAH	Isle of Capri	02-05 Feb
EU-031	IC8AMR	Ischia Island	25-26 Feb
EU-031	IC8SDL	Isle of Capri	17 Feb
EU-034	ESØNW	Hiiumaa Island	16 Feb
EU-037	SM7CRW	Oland Island	20 Feb
EU-037	SM7DLZ	Oland Island	05-28 Feb
EU-038	PA2JJB	Texel Island	05 Feb
EU-040	CT1EKY/P	Berlenga Island	29 Feb
EU-042	DK8OL	Isle of Sylt	11-20 Feb
EU-046	LA5QFA	Vanna Island	04-23 Feb
EU-047	DJ9IN	Norderney Island	17-20 Feb
EU-048	TM2A	Belle-Ile	19-25 Feb
EU-052	SV8CS	Zante Island	14-25 Feb
EU-055	LA2BKA	Reksteren Island	08-22 Feb
EU-057	DL4PM	Ruegen Island	05-29 Feb
EU-067	SV1CU/8	Tinos Island	06-10 Feb
EU-070	TM5CRO	Porquerolles Island	01-04 Feb
EU-082	U1ZA/A	Kildin Island	19-26 Feb
EU-120	MØBTP	Isle of Wight	10 Feb
EU-124	GWØHGN/P	Anglesey Island	12 Feb
EU-124	GW4DIY/P	Anglesey Island	23 Feb
EU-128	DL1BKK/P	Fehmarn Island	27 Feb
EU-129	DL1BWU/P	Usedom Island	06 Feb
EU-131	I3THJ	Veneto Region	13 Feb
EU-146	PA9MR	North Sea Coast South	09-11 Feb
EU-146	PA5TT	North Sea Coast South	15 Feb
EU-151	EA5DHK	Escollo del Moro	06 Feb
EU-151	EC5AJP	Escollo del Moro	06 Feb
NA-028	KL1SLE	St George Island	23-27 Feb
NA-031	AA1AC/P	Aquidneck Island	21 Feb
NA-031	W1LY	Conanicut Island	18 Feb
NA-036	VE7IM	Vancouver Island	01 Feb
NA-036	VE7NS	Vancouver Island	22 Feb
NA-036	VE7DXF	Vancouver Island	11 Feb
NA-046	W1GAY	Martha's Vineyard Is.	11-29 Feb
NA-047	V3FN/VYØ	Baffin Island	23-24 Feb
NA-049	HK3OSA/Ø	Providencia Island	01 Feb
NA-048	C6AKP	Bimini Islands	14-22 Feb
NA-048	C6AKQ	Bimini Islands	15-18 Feb
NA-051	VE7TLL	Queen Charlotte Is.	01-22 Feb
NA-055	AK1L	Vinylhaven Island	09-14 Feb
NA-058	AC4WW/P	Jekyll Island	05-06 Feb
NA-058	K4HBH/P	Jekyll Island	10 Feb
NA-062	WQ4J	Key Largo	01-23 Feb
NA-065	N6FD/7	Fidalgo Island	01-28 Feb
NA-065	N7WI	Whidbey Island	05-27 Feb
NA-067	AA3ID	Hatteras Island	11 Feb
NA-072	3E1CW	Contadora Island	19-20 Feb
NA-072	HP1XVH	Contadora Island	24-28 Feb
NA-080	AC8W/C6A	Abaco Island	16-25 Feb
NA-080	K8DD/C6A	Abaco Island	18-24 Feb
NA-083	KA3UNQ/M	Chincoteague Island	11 Feb
NA-083	WZ3AR/4	Chincoteague Island	19 Feb
NA-092	K9PPY/5	South Padre Island	14-16 Feb
NA-110	WB4WTY	Folly Island	11 Feb
NA-110	AA4V/P	Isle of Palms	05-13 Feb
NA-110	AC4WW/P	Hunting Island	06-07 Feb
NA-111	N2JTO	Long Beach Island	20 Feb
NA-138	N5VL	Amelia Island	01-29 Feb
NA-138	AA4WW/P	Amelia Island	04-05 Feb
NA-139	KA3UNQ/P	Assateague Island	11 Feb
NA-140	W3YN	Kent Island	15 Feb
NA-141	AE4YP	Orchid Island	02 Feb
NA-143	AB5EB	Galveston Island	04-25 Feb
NA-149	HH6JH	Haiti's Coastal Islands	22-23 Feb
NA-160	HR6/K7DBV	Cayos Cochinos	26 Feb
NA-198	VO1BAR/P	Exploits Island	12-26 Feb
OC-008	P29BW	New Britian Island	13-26 Feb
OC-013	ZK1JD	Rarotonga Island	07-14 Feb
OC-014	ZK1NCI	Manihiki Atoll	01-02 Feb
OC-022	YC9BU	Bali Island	02-27 Feb
OC-022	YB9ZBI	Bali Island	27 Feb
OC-027	FO5QG	Nuka Hiva Island	11 Feb
OC-027	FOØCLA	Marquesas Islands	22-29 Feb
OC-032	FK8HC	Freycinet Island	25-26 Feb
OC-033	FK/F6DLN	Lifou Islands	28 Feb
OC-059	V63AO	Kosrae Island	06-27 Feb
OC-067	FO5NL	Raiatea Island	17 Feb
OC-067	FO5QS	Huahine Island	10-17 Feb
OC-070	YE8XM	Ambon Island	15 Feb
OC-075	YC5YAS	Batam Island	20-29 Feb
OC-076	YC8XNE	Sula Islands	27 Feb
OC-082	ZK1XXC	Penrhyn Island	29 Feb
OC-084	T32NCC	Fanning Island	06-19 Feb
OC-100	H40MS	Temotu Islands	01-15 Feb
OC-129	DU6BG	Panay Island	06 Feb
OC-130	DU8BOF	Mindanao Island	24-27 Feb
OC-130	DU8DJ	Mindanao Island	09 Feb
OC-137	VK4CY	Lamb Island	15-26 Feb
OC-137	VK4GP	Bribie Island	28 Feb
OC-137	VK4LV	Bribie Island	18 Feb
OC-139	VK5ACY	Kangaroo iSLAND	23-25 Feb
OC-146	YC8NLF	Sulawesi Island	25 Feb
OC-146	YC8BHC	Sulawesi Island	02 Feb
OC-146	YC8UFF	Sulawesi Island	02 Feb
OC-146	YE8ZQT	Sulawesi Island	29 Feb
OC-147	YC9YKI	Yapen Island	24-29 Feb
OC-148	YC9MKF	Timor Island	13-25 Feb
OC-149	H44NC	New Georgia Islands	15-28 Feb
OC-151	YC9LQA	Flores Island	25 Feb
OC-158	H44MS	Florida Island	22-26 Feb
OC-169	A35RK	Lifuka Island	02 Feb
OC-210	YC8RBC	Sangihe Island	25-29 Feb
OC-210	YC8RRK	Sangihe Island	10-29 Feb
OC-210	YC8TXW	Sangihe Island	06-27 Feb
SA-008	LU8XW/X	Isla Redonda	25-27 Feb
SA-016	PR8HC	Sao Luis Island	01 Feb
SA-021	L44D/D	Trinidad Island	25-27 Feb
SA-023	PY6JJ	Itaparica Island	08-24 Feb
SA-026	PP5JD	Santa Catarina Island	16 Feb
SA-026	PP5UA	Santa Catarina Island	01 Feb
SA-068	8R1AK/P	Leguan Island	12-21 Feb

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DXCC Card Checking

On 04 February 2000, the ARRL DXCC Desk in Newington announced an enhanced DXCC Card Checking program, effective 01 April 2000. The new program, approved by the ARRL Board of Directors at its January 2000 board meeting in Memphis, means DXCC members may have their cards checked by local card checkers without having to mail cards to ARRL Headquarters.

Under the new program, DXCC Card Checkers will be able to check all awards, including 160-Meter DXCC, and all QSL cards from any current DXCC entity. This will apply to both new awards and endorsements. Contacts made up to 10 years prior to the current year will be eligible for field checking, while older cards and those from deleted entities still may be sent to ARRL HQ.

Convention

Don't forget to mark your calendar for the Pacific Northwest DX Convention, DX2000, in Vancouver this summer. Save the weekend of 28-30 July. It will be at the new Hilton Vancouver Metrotown Hotel in Burnaby and is sponsored jointly by the BC DX Club and the Fraser Valley DX Club. The complete convention package, which includes the Saturday evening dinner and Sunday morning brunch, is $58 in U.S. funds. If you prefer Canadian funds try $80. Additional information is available from the website at http://www.bcdxc.org, which includes the registration form. If you don't have access to the internet contact Dave Shipman, VE7CFD, 1013 Sinclair Street, West Vancouver, BC V7V 3W1 CANADA.

Antique QSL Department

Old-time DXers will remember Gus Browning, W4BPD, and his many DXpeditions. Bhutan evidently was a favorite spot where he operated as ACØH from Chuka Dzong on 04 May 1965. Many of the QSL cards for Gus' operations were sponsored by Stuart Meyer, W2GHK, of Hammarlund Radio, and who also handled QSL requests for others.

ACØH was not the only call Gus used while operating in Bhutan. Just the day before Gus was signing AC9H from Dechen-Choling. And, two years earlier Gus signed AC5A and AC7A. The latter two calls were confirmed by Ack Atkerson, W4ECI, of ACK Radio Supply.

This QSL card was furnished by Dave Kennedy, N4SU, who also provides the next card.

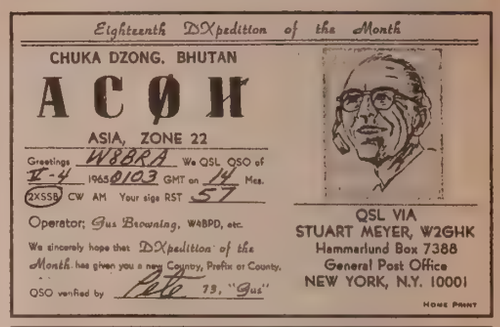
CR8AC was worked by Dave back in 1957 on 20 Meters CW. The operator was Raul Fernandes of Vasco da Gama in Portuguese India. This one would later be added to the Deleted Countries List.

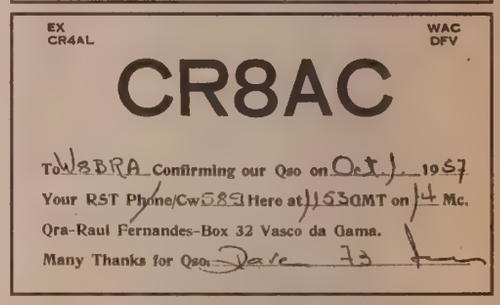
IOTA chasers might like this one. VQ9HCS was operated by Harry Stickley at a research station on Aldabra Island (AF-025) in the Seychelles. This card, along with several others I have used in the past, was provided by Leo Haijsman, W4KA.

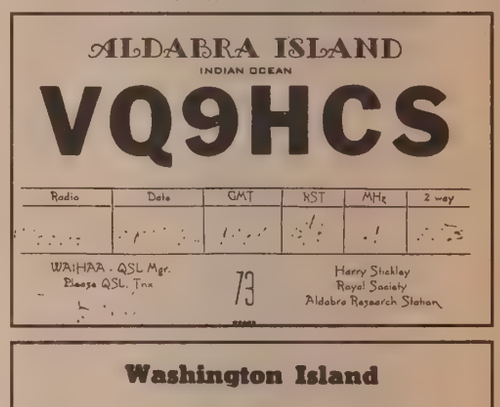
And, another one for IOTA hunters — how about VR3AK on Washington Island (OC- 084) in the northern Line Islands? This was the call used by John Fleetwood, who Leo worked back in 1976. The island is now part of East Kiribati.

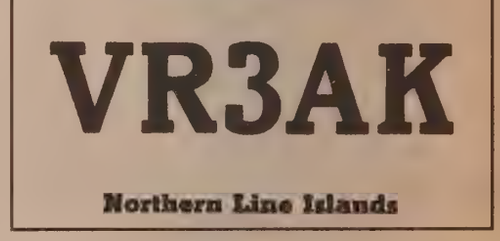
QSL Information

425 DX News says when sending QSL requests to Hong Kong do not include China or Peoples Republic of China in the address. To do so would direct mail via Shanghai, adding a month to delivery time, and also the chance of the mail never reaching Hong Kong. Correctly addressed mail will go via direct flights to Hong Kong.


Eighteenth DXpedition of the Month
CHUKA DZONG, BHUTAN
ACØH
ASIA, ZONE 22
Greetings W8BRA We QSL QSO of
II-4 1965 0103 GMT on 14 Mcs.
(XSSB) CW AM Your sigs RST 57
Operator; Gus Browning, W4BPD, etc.
We sincerely hope that DXpedition of the Month has given you a new Country, Prefix or County.
QSO verified by Pete 73, "Gus"
QSL VIA
STUART MEYER, W2GHK
Hammarlund Box 7388
General Post Office
NEW YORK, N.Y. 10001
HOME PRINT


EX CR4AL
WAC DFV
CR8AC
To W8BRA Confirming our Qso on Oct 1 1957
Your RST Phone/Cw 589 Here at 1153 GMT on 14 Mc.
Qra-Raul Fernandes-Box 32 Vasco da Gama.
Many Thanks for Qso. Dale 73


ALDABRA ISLAND
INDIAN OCEAN
VQ9HCS
Radio | Date | GMT | RST | MHz | 2 way
WA1HAA - QSL Mgr.
Please QSL. Tnx
73
Harry Stickley
Royal Society
Aldabra Research Station


Washington Island
VR3AK
Northern Line Islands

If you worked C56JHF recently you may request a bureau card via sm0jhf@qsl.net, mentioning C56JHF in the subject line. Henryk does not collect QSL cards so he will not need yours.

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SS-006	160M SINGLE-BAND 1/2-SLOPER	60 OR 65' LONG	$70.00
MBC-068-40	160-80-40M BROAD BANDER	105' LONG	$90.00
MS-064-832	160-80-40-30-15-12M DOUBLE SLOPER	60' LONG	$90.00

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They cannot accept cards for the following prefixes: A5, A6, D2, J5, KHØ, KH1, KH4, KH5, KH7K, KH8, KH9, KP1, KP5, P5, S7, T2, T3, T5, T8, TJ, TL, TN, TT, TY, V6, VP2M, XU, XW, XZ, YA, ZD9, 3C, 3W, 3X, 5A, 5R, 5T, 5U, 7O, 7Q, 8Q, 9N, 9U, and 9X. In addition they can't forward cards for YT4, YU4, YZ4, 4N4 and 4O4, unless contacts were made prior to May 1993. This apparently is a problem with the Bosnia and Herzegovina QSL bureau, which now uses the T9 prefix. I worked a YT4 last year and the card was returned for the above reason. My only question is that I assumed it is Yugoslavia; evidently I assumed wrong.

The JARL QSL Bureau address has been changed. The new address is: JARL QSL Bureau, Shobara Post Office, Shimane 699-0588, JAPAN. The 699-0588 is a special postal code number for JARL QSL Bureau. Questions may be sent via e-mail to intl@jarl.or.jp. Thanks to The Daily DX for this information.

Davor Tomak, 9A3ZA, says there has been an unexpected delay with the printer handling the 9AØDX cards for the IOTA DXpedition last July.

Frank Rutter, DL7UFR, says that the QSL cards for his recent operation from Kiribati (T3Ø and T33) should have been mailed by now. The German postal rates are very high and he has to pay for an air mail letter with a maximum weight of 20 grams 3,00 DM. An American dollar converts only to 1,90 DM. Requests containing a single green stamp will be mailed from the U.S. when a friend of his travels to the states.

Alex Shtanov, RA4HT, says that all Russian addresses in QRZ (an internet database) are incorrect.

Thanks go to the following contributors for this month's column: 9A3ZA, G3KMA, RA4HT, VK9NS, K3ZO, N4SU, W4KA, K6NDV, Western Washington DX Club (WAØRJY), Northern Arizona DX Association (W7YS), DXCC Desk (NC1L), Web-Cluster (OH2AQ), 425 DX News (I1JQJ), The OPDX Bulletin (KB8NW), DX-News (NJDXA), The Low Band Monitor (KØCS), The Daily DX (W3UR), and QRZ DX (N4AA).

How's your DXCC Millenium coming? The ARRL DX tests should have been a big help. I stumbled through the CW weekend with my old trusty J-38 key from bygone days. My bug broke earlier in the month while after XU7AAV. By the way, I worked my 100th on 12 February and after reviewing the ones worked I noticed there were some entities I hadn't worked in years.

The CW portion of the DX test was a real challenge with that damn J-38. However, the results were my best effort ever in the CW portion of the annual event. Maybe I should consider staying with it. Interesting how many came back in a QRS style to give me a contact.

— John F.W. Minke III, N6JM can be reached at: P.O. Box 310, Carmichael, CA 95609-0310 or via e-mail: n6jm@pacbell.net.

DX Prediction — May 2000

Maximum usable frequecy from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 939, Vienna, VA 22183). The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa—Kenya/Nairobi, Asia—Japan/Tokyo, Oceania—Australia/Melbourne, Europe—Germany/Frankfurt, and South America—Brazil/Rio de Janeiro. Smoothed sunspot number = 144. Chance of contact as determined by path loss is indicated as bold ***MUF** for good; plain MUF for fair, and in *(parentheses)* for poor. UTC in hours.

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(19)*	***20**	***25**	16	***20**
10	23	***16**	***22**	***22**	***21**
12	29	***22**	***20**	***26**	***29**
14	33	***22**	***19**	***28**	***35**
16	***35**	18	18	***30**	***39**
18	***37**	*(17)*	17	***28**	***42**
20	***35**	23	35	***26**	***43**
22	***29**	26	***42**	***23**	***43**
24	25	***29**	***44**	***19**	***35**
2	***22**	***29**	***44**	***16**	***29**
4	***23**	26	***42**	***19**	***25**
6	24	***23**	***36**	***19**	***22**

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(19)*	***20**	***23**	*(17)*	***24**
12	27	***16**	***21**	23	22
14	31	***19**	***19**	***26**	***30**
16	34	19	18	***29**	***36**
18	***36**	***24**	18	***27**	***40**
20	***35**	***29**	***35**	23	***42**
22	***29**	***30**	***42**	18	***41**
24	25	***31**	***44**	16	***37**
2	22	***30**	***44**	14	***31**
4	***23**	***29**	***43**	***22**	***26**
6	***28**	***27**	***37**	***23**	***23**
8	23	***24**	***26**	***19**	***21**

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	***25**	19	***29**	16	***21**
9	27	*(17)*	***22**	***21**	***21**
11	***34**	23	***20**	***26**	***29**
13	***39**	***24**	*(19)*	***28**	***35**
15	***43**	20	*(18)*	***30**	***39**
17	***42**	*(16)*	*(17)*	***29**	***42**
19	***38**	22	27	***28**	***43**
21	***32**	26	39	***26**	***43**
23	***27**	***28**	***43**	***23**	***39**
1	***23**	***28**	***44**	***20**	***32**
3	***19**	25	***43**	***17**	***27**
5	***28**	***23**	***35**	***20**	***24**

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OD5IULabib Shammaa, P. O. Box 20, Sidon, Lebanon

OK1FWALadislav Sima, Prazska 113, Caslav, CZ 286 01 Czech Republic

PT2BWAriosto Rodrigues de Souza, P.O. Box 03821, 70084-970 Brasilia - DF, Brazil

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TF3AHaraldur Sigurdsson, Midvangi 159, IS-220 Hafnarfirdi, Icelnad

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V44KAAWinston Hanley, P.O. Box 743, Basseterre, St. Kitts, West Indies

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VP9/KE0UIBob North, 3205 Cavell Lane, St. Louis Park, MN 55426, USA

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W3HCCarl F. Mcdaniel, 2116 Reed Street, Williamsport, PA 17701-3904, USA

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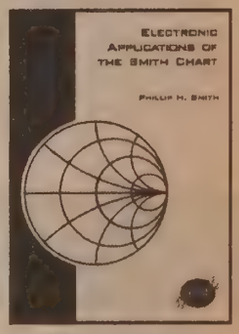

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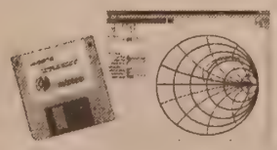

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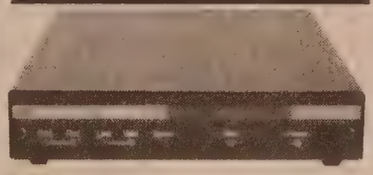

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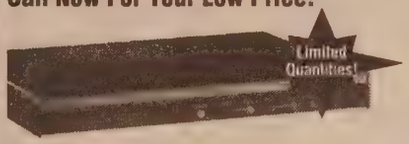

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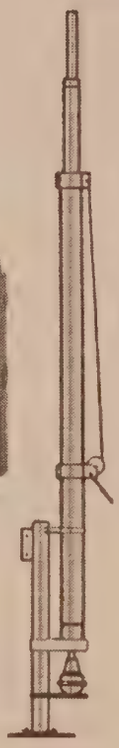

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SAR Vision 2010

As I was poking around some search and rescue Internet sites, a comment caught my interest. Coordination, planning, and "SAR" in general was described as an art and a science. This was presented as a "new" idea or revolutionary concept. For many years, SAR was simply an "art." By this I mean that you undertook a SAR mission based on your own experience. In some jurisdictions, experience was not gained because elections changed the power structure every few years.

In other areas, SAR leaders became expert because of their experience over time. You could ask a member of the latter group to describe how to run a SAR mission and he or she would be hard pressed to put specifics in place — they simply ran the mission based on their experience. It was an "art." Decades ago the Navy prompted research into search and rescue "theory" and a number of papers and books were written to help plan optimal search strategy and best use of resources.

I remember in the 1980s when charts and graphs were popular which allowed a search to be planned and evaluated based on probabilities and through proper resource allocation. At the end of each search day, we would compile statistics and go home knowing we were 60 or 80 percent effective. During these years, the function of planning, in my opinion, regressed from an "art" to a "science." My search coordination materials consisted of notebooks of charts and statistics, printouts of analysis, and odd assortments of "factors" we would use to evaluate how well we were doing to locate a missing aircraft. Because much of the planning seemed to be "science," one could become a search coordinator over night — all you needed to do was know how to apply and interpret the various charts and you were in charge. In fact you could run the search by phone. You would determine the search areas based on probability, give your search crew an assigned area, have them report back their "efficiency," and generate your probability of success.

As these "science" years became popular I also believe efficiency dropped because we (as search managers) were fooled into thinking the charts and statistics obviated the need to have several people contribute "wisdom" to the planning process — in other words, it became a non-communicative process. We didn't need to bat ideas around as long as our search plan made mathematical sense and our search efforts returned acceptable probability of success.

In a sense, science replaced art. Can you see some parallels in communications? Have we allowed all of our bells and whistles to replace the "art" of communication?

In April 1996 a group called ICSAR (Interagency Committee for Search and Rescue) created a working paper of sorts concerning technology. The paper was titled "SAR Vision 2010" with a vision statement: "Apply the most effective systems to save more lives with less risk at less cost." As I explore some related issues this month, keep in mind that a "system" must include the people of an organization — and we often overlook the "people" element as we develop goals and objectives.

The FCC is currently studying the issue of personal rescue transmitters and designating several VHF frequencies for unlicensed, low-power multiple use. In the 1970s an emergency locator transmitter (ELT) was developed and mandated for aviation use. Almost overnight the search and rescue picture changed as these tiny transmitters became an emergency factor. I remember the many companies that marketed portable direction finding gear and the many training courses that sprang up to support this technology.

Some of you old pilots will remember the DF-88s, the B-Lines, and other tracking devices. We learned how to use a yagi antenna and to do the "build and fade" location technique. Search crews could earn a specialty rating if they knew DF basics. In Utah a special group of Amateur Radio operators joined Civil Air Patrol and became the "Utah Emergency Location Team (UELT)." Today I still carry my portable L-Tronics Little L-Per in my truck so I can DF emergency signals. Many sheriff and Amateur Radio groups have also been trained for aircraft ELTs and a lot of time is expended every year to track real and false signals.

Should the FCC authorize a personal location system, one large issue is that of tracking. What agency, or agencies, will have responsibility and be alerted when an emergency signal is activated? Given our (the SAR community) experience with ELTs, there will be a lot of false alarms and a great need for teams who can hike into the backcountry to silence false (and discover real) signals. If I were looking for a specialty for my local radio group, this would be one area I'd get involved with quickly. Your average police agency is NOT going to have the system (human or technical) to handle a large number of signals.

Now let's consider the non-licensed

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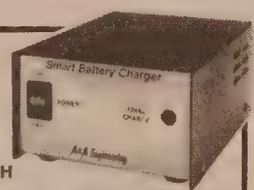

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services. Currently there is the Family Radio Service which consists of 14 UHF frequencies and low-power transmitters. They're popular and you're going to see more and more uses by search teams and by victims. Our Scout troop uses them on camping trips and I can see the need for a team that can both communicate and DF an FRS signal. Should the FCC (and I can't see why they won't) authorize the same type of use on some VHF frequencies, you now have another group of users on different frequencies. As a SAR team you might be told "they have a radio" and must be prepared for both UHF and VHF.

Let's get back to the ICSAR paper. The objective is to "foster innovation in technical, administrative, and informational systems which will improve the ability" of agencies as they respond to search and rescue emergencies. Specifically the paper lists these objectives:

— Detect distress and assist search and rescue from space.

— Improve passive and active search capabilities to locate the distress.

— Foster development of low-cost distress alerting and locating systems with two-way communication devices.

Here are some of the goals for SAR Vision 2010:

— Notify the proper responder with location information within five minutes.

— Decide to launch SAR effort within 15 minutes of notification. — Arrive on scene with appropriate resources within 90 minutes of notification.

— Achieve a false alarm rate of less than 10 percent.

As I read the ICSAR group's paper, I was excited to see that there will be a great need for technical specialty and for improved communications. What I didn't find was any statement as to the encouragement and development of the most important "system" — the human element. Remember my opening comments about art AND science. The best use of resources in an emergency will be the effective use of systems AND people. One without the other simply fails.

Where does that place Amateur Radio and all of our technology? Can you see the need for wisdom and ability for direction finding? What about the ability to establish communications from urban command posts and back country staging areas. Antennas will need to be set up, fuses replaced, messages sent, signal paths evaluated, along with a myriad of other issues.

I would encourage you to continue to establish working relationships with your local emergency agencies and prepare to help them augment emergency responses with a technical force of volunteers.

I can just imagine a sparsely populated county in Southern Utah that's home to some of the best bike and hike terrain in America. Can you envision a scenario during a stormy Saturday where a dozen or more personal emergency beacons activate in terrain you cannot simply drive or fly to? Now is the time to maintain your niche in emergency services by continuing to focus on what Amateur Radio does best — radio!

We'll explore some of the other goals and objectives of SAR Vision 2010 in future columns. Until next month, best wishes from Salt Lake City!

—Jerry Wellman, W7SAR, can be reached at: P.O. Box 11445, Salt Lake City, UT 84147 or via e-mail: jw@desnews.com.

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FCC refuses to get involved in repeater coordination

The text of the Hollingsworth letter

Dear Messrs. Buxton and Labb:

This is in response to your 01 November 1999 letter to Representative David Drier. In that letter you enclosed a "Meeting Notice" published by the Southern California Repeater and Remote Base Association (SCRRBA). You complained that the notice stated that voting on the issues to be discussed at the meeting was limited to "full members," i.e., those who had paid their dues and who own or operate a coordinated relay system in the bands SCRRBA coordinates.

You contend that such a policy is exclusionary and in violation of the Commission's policy regarding frequency coordination in the Amateur Radio Service. You requested that we issue a "cease and desist order" directing SCRRBA to halt all further activities until such time as it complies with the Commission's frequency coordination policy.

You were previously informed by D'wana R. Terry, Chief of the Public Safety and Private Wireless Division of the Wireless Telecommunications Bureau, in a letter dated 20 October 1999, of the Commission's policy in such matters. In that letter, the Wireless Bureau stated that "Changing coordinators is the mechanism that the Commission anticipates Amateur Radio operators in a local or regional area would use to replace a frequency coordinator that was not representative of all local Amateur radio operators or otherwise meeting their needs."

In view of the above, SCRRBA's action does not warrant enforcement and we decline to take action in this matter.

Sincerely,
W. Riley Hollingsworth
Special Counsel, Amateur Radio
Enforcement Bureau

What the letter means

The FCC's Enforcement Bureau is making it clear that it will not get involved in issues involving repeater coordination, regardless of what Hams might want.

The story goes this way. As previously reported, Dale Buxton, W6PWY, and Larry Labb, KI7AX, had formed a new repeater council, the Southern California FM Association, to attempt to assume coordination the 70 centimeter band in Southern California after the incumbent coordinator, the Southern California Repeater and Remote Base Association (SCRRBA), voted to change the area bandplan from 25 kHz to 20 kHz. Buxton and Labb, and a large number of other amateurs, favored a bandplan using 12.5 kHz inter-system spacing and provision to introduce 6.25 kHz spacing when technology allows.

But as non-members of SCRRBA, they were not permitted to vote on the issue. So they complained to their congressmen who in turn approached the FCC regarding its oversight of coordination issues. That lead to the 20 October 1999 letter from D'wana R. Terry, Chief of the FCC's Public Safety and Private Wireless Division published in its entirety in Worldradio late last year.

But the Terry letter did not really give Buxton and Labb the authority to overturn SCRRBA they were looking for. So they next complained to Hollingsworth's office claiming that SCRRBA's "members only" voting policy on band planning was exclusionary and that it was therefore in violation of the Commission's Amateur Radio frequency coordination policy. Labb and Buxton even asked the agency issue a "cease and desist order" directing SCRRBA to halt all further activities until it complies with the policy.

What happens next?

I think that you can see that the above referenced letter changes little since the letter from D'wana Terry was issued. Both hers and Hollingsworth clearly state that it is up to the Amateur Radio community (of a given geographic area) to facilitate a change in coordinators, when and if the community deems this to be necessary.

But some questions are not addressed by the FCC and I kind of doubt if they ever will be. For instance: What is the community? Is it the repeater owner-operators on a given band? Is it all repeater owner-operators in a given geographic area? Is it all of the system owners and their users in a region or, as many contend, is it all licensed radio amateurs in that region who by virtue of their holding a license have the right to be a deciding factor in the change of coordinator process?

More important, once the "who" is determined, the next thing to determine is the process by which the change of coordinators can be accomplished. Do you do it by holding a meeting and count the heads of those who show up? Do you canvass all the radio clubs and then add up the votes?

What about those who don't belong to a radio club? Or those who have call signs but are inactive? The variables are so horrendous that there is really only

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one answer. Its the one I firmly believe that the FCC's D'wana Terry is pointing to but which the Ham community, for its own tunnelvision, has refused to see. This would be a mail-in referendum sponsored by the challenging want-to-be coordinator encompassing all amateurs residing in the geographic region in question, as pruned from the FCC's own call sign database. And it would have to utilize the normal safeguards that any mail-in election (like those run by the ARRL to elect its Directors) including bonded and certified vote counting to insure accuracy.

Who would pay the bill?

Have you any idea what such a referendum would cost?

Suppose you have formed the "American Repeater Coordinating Committee" and want to replace the "Acme Repeater Coordination Council" that operates in your geographic area. "Acme" protests and dares you to overturn it. Wanting to be the "nice guy" you decide to sponsor a referendum vote. You begin by researching the number of amateurs who live in your "geographic region" and come up with a total of 4,500.

First there is the printing of 4,500 ballots, cover letters, outgoing envelopes and return envelopes.

My local printer says that constitutes a pretty small one-time order and you have to figure close to a $.50 per ballot package. So we start with $2,250 in printing.

Next comes postage both ways. 4,500 ballots outgoing at 33 cents each means another $1,485 in outgoing postage and $1,485 in return postage.

Of course you need a temporary post office box. Figure at least three months to collect as many votes as are going to arrive at $50 a month. That's another $150.

To keep from having any air of impropriety regarding such a referendum, an outside audit house like Price-Waterhouse-Coopers (www.pcglobal.com) would be needed. I have no idea what this would cost so lets take a guess and peg it at about $5,000 for a small referendum like this.

If all of our numbers are even close, that's $10,370. Even if you decide to eliminate the expensive audit house and ask a local Amateur Radio Club to perform the talley, you still will be spending over $5,000 to decide on who is going to perform a thankless job, 24 hours a day, 7 days a week, 365 days a year, while receiving nothing more than the scorn of your disgruntled fellow Hams in return.

So, lets suppose the vote goes in favor of the clean, new and ultra friendly "American Repeater Coordinating Committee" but the "Acme" group refuses to accept the results of the vote. In fact, they send an overt warning to the newcomers: "...keep your nose out of our business or you are going to wind up being sued!"

Applying this to the realm of repeater coordination, including demands to an upstart or replacement coordination entity to cease and desist from interfering in any way with the ongoing work of an existing coordinator — even if the existing coordinator is not really doing very much to aid its community.

I fully expect to see litigation on the part of established coordinators trying to enjoin newbie coordinators from invading their territory. I also expect to see action filed by the new coordinators who are trying to get a foothold in a

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given geographic region.

Can this really happen? It already has all happened before — back in the 1980s in the case of the 220 FCC vs. the 220 SMA in California. And, few people ever learn from past mistakes. In the end, these suits will almost assuredly force a judge and jury to decide the validity of all coordination in the Amateur Radio Service. Especially now that the FCC has said it is not going to get involved in settling these disputes.

Where will the first cases take place? Not surprisingly, I believe the first two will occur here in Southern California and Indiana. Both regions are known for taking the leadership initiative and being "first" — be they right or wrong. Both regions have escalating "coordinator vs. coordinator" feuds going on where the groups involved view one another as avowed enemies. In both regions there is not even any unofficial communications taking place. I think it is only a matter of time before one or more of these groups decides to sue.

Could there be government intervention?

Here lies another dicotome. Remember, that a court finding could not only validate the concept of coordination, it would also mandate the need for coordination in the first place. In doing so it could actually force the FCC to recognize the authority of coordinators and the validity of the overall process. As already stated, this is something the government is defiantly reluctant to do.

As you can see, even with the pressure from a congressional representative, the FCC is standing very firm in its resolve to not get any further involved in the issue of coordination of Amateur Radio Service repeaters (as there is no incentive in doing so). As the overall coordination community wants direct recognition of its works and legal standing in the eyes of the Commission, the only other option left to anyone seeking to force the issue is the federal court system.

The bottom line to all of this — in my humble opinion there will be a lot of attempts to overthrow existing coordinators but only in geographic regions where the existing coordinator is apathetic toward the masses will there be any success. In most cases it will be an exercise in utter futility with money being spent on legal bills that could better be spent having fun.

The best repeaters in town — Columbia, SC

When I first met Renee Worthington, WB2BCO, she was a 14 year old 'oddity' on the 6-Meter band. A product of New York City in the 60s, Renee was your typical 'All American Girl.' But she was, and by her own admission she still is, a bit of a rebel. When "society" expected her to be playing with Barbie dolls and the like, Renee chose a Lafayette HE-45 6-meter AM transceiver instead.

Renee recently moved to Columbia, South Carolina where she has become involved with a rather unique radio club. Not only does the Columbia Amateur Radio Club do all the things that you would expect a club to do, it also sponsors one of the most interesting FM repeater systems to be found.

The system consists four repeaters, all require a CTCSS tone of 156.7 Hz. The first repeater is the 147.330(+) located in downtown Columbia, and provides coverage to downtown Columbia, central and western Richland County, and central and eastern Lexington County.

The next repeater is the 146.775(-) located on the far eastern side of Fort Jackson. This repeater covers areas such as Kershaw, Sumter, Lee and Florence Counties.

The third repeater is the 145.430(-) in western Lexington County near Gilbert, SC. It provides coverage to western Lexington County, eastern Aiken County, and eastern Saluda County.

The last is the 444.200 (+). This repeater is located on the tallest building in West Columbia, SC. It is the backbone of the linked system. This repeater provides coverage to eastern Lexington County, western Richland County, and most of downtown Columbia. Usually all the repeaters are linked together, but they can be unlinked if needed.

Renee also told me about club member Bruce Schweitzer, AE4NO, a Science and Technology teacher at Heathwood Hall Episcopal School. The school call sign is W4HHS and the school has an extensive assortment of Amateur Radio gear. According to WB2BCO, the school also supports the two local radio clubs and offers its grounds for field days. It is also her understanding that the school club has several younger members of the local Ham radio community involved.

More information on the Columbia Amateur Radio Club and its repeater is available on the club's website at: http://www.qsl.net/kf4ghc/colarep.html.

— Bill Pasternak, WA6ITF, can be reached at: 28197 Robin Ave., Saugus, CA 91350, e-mail: billwa6itf@aol.com, AOL: BILLWA6ITF, Netcom: newsline@ix. netcom.com, 24-hr voice/fax: 805/296-7180,

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ALASKA

South Central Radio Club. 8023 E. 11th Ct., Anchorage, AK 99504. Meets 2nd Fri./monthly, 7 p.m., UAA Business Ed. Bldg., Rm. 220. KL7CC, (907) 338-0662. Info: club rptr 146.97(-) PL 103.5Hz 10/00

ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 20 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., APS Shure Building, 2124 W. Cheryl, Phoenix, AZ. Info:www.goodnet.com/indirect/www/ara 12/00

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. K7RDG/R 146.76(-) rptr. PL162.2. 5/00

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., Tucson Med. Cntr., Grant & Beverly St. in the AZ Rm. of the Volunteer's Bldg. (1st bldg. on the left going north off Grant). 2/01

CALIFORNIA

Amador County Amateur Radio Club. P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Thurs./monthly, 7:30 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: 146.835(-). 5/00

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m., VFW #9650, 3210 W. Center St., Anderson, CA. Net every Tues., 7:30 p.m. on 146.640 freq. Website: www.snowcrest.net/bgorski/index.html 2/01

Beach Cities Wireless Society. P.O. Box 4016, San Clemente, CA 92674. Meets 2nd Thurs./monthly, 7:30 p.m., Ole Hansen Beach Club, 105 W. Avenida Pico, San Clemente. Rptr. 146.025(+) PL 110.9. 9/00

Clairemont Rpt. Assoc. Meets bimonthly brkfst mtg, 3rd Sat./odd numbered months, Westminster, CA. Info: send SASE to P.O. Box 7675 Huntington Bch, CA 92615 or W6UTE in Call Bk. Net ea. Tue., 7 p.m. 145.220(-)PL 103.5 in So. CA 3/01

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 2nd Wed./monthly, 6:30 p.m., Portola Com. Cntr., 45480 Portola, Palm Desert. Info: Bill Dews, (760) 346-8611. Net Thurs. 7 p.m. 146.025(+) PL 107.2. 5/00

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 08:00, Denny's, El Cerrito, CA. 145.110 PL 82.5 Info: S. Clark, KB6SEI, (510) 724-0158. 2/01

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs.,7:30 p.m. http://www.downeyarc.org. Info L. Vaughn, kd6nzw at kd6nzw@downeyarc.org 5/00

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 11/00

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 7:30 p.m. at 345 Cherry St. (Library Rm.), Chico. 5/01

Golden Triangle Amateur Radio Club. P.O. Box 1335, Wildomar, CA 92595. Meets 4th Mon./monthly, 7 p.m., Beverly Health Care, 24100 Monroe Ave., Murrieta, CA 92562. Rptr: W6GTR 146.805(-) PL 100. Info: H. Wijma, AC6VN, (909) 693-2383. E-mail: ac6vn@cs.com 8/00

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). Info: LARK Sec., P.O. Box 3190, Livermore, CA 94551-3190. (925) 373-1386. 2/01

Los Banos Amateur Radio Club. Meets 2nd Sat./monthly, 7 p.m., Scout bldg. at Pacheco Pk., 7th St. & Pacheco Blvd. Info: M. Germino, AD6AA, (209) 826-0903, e-mail: AD6AA@arrl.net. Net 147.060(+) PL 107.2 every Thur. 7 p.m. Rpt. KB6NMP 147.06(+) PL 107.2 & 444.00(+) PL 241.8. http://www.qsl.net/lbarc/ 6/00

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, 91 Fwy/Lakeview. Info: R. Davis, KD6FHN, (949) 551-1036 or (949) 551-2010. 5/00

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 7:30 p.m., Our Savior's Lutheran Ch., 1035 Carol Ln, Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 8/00

Nevada County ARC. Meets 2nd Mon./monthly, 7 p.m., Salvation Army Bldg., 10725 Alta St., Grass Valley, CA. Net Tues. 7 p.m. 147.015. Info L. Johnson, KE6HWE, lindasue@mail.telis.org. (530) 273-2008. 9/00

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets 8 p.m. Tue., (except 3rd Tue.) & Thur., 145.190(-) (PL 162.2 Hz) & 224.400(-) MHz. Info: B. Griffin, N6WWY, (916) 729-7117. E-mail: nhrc@ K6IS.org or http://www.k6is.org 4/01

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. Talk-in 146.550 (S). Contact Parry Hoffman, K6LDC, (714) 636-4345 WWW.W6ZE.ORG 2/01

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Ch., Telegraph Rd. & Teloma Dr., Ventura, CA. Info: J. Casper, N6PIQ, (805) 649-1445. 5/00

Redwood Empire DX Assoc., W6KB. P.O. Box 455, Santa Rosa, CA 95402. (707) 544-4944. DX & contest club. Dinner mtg. 3rd Wed./monthly, 6:30 p.m., Carrows Rest., Hwy 101 & E. Washington, Petaluma. www.redxa.com 12/00

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. Info: (916) 492-6115.10/00

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net, noon on rptr. W6AK/R 146.91(-). T. Preston, KC6EO, (916) 722-9358 or L. Ballinger, WA6EQQ, (916) 393-4775. 4/01

Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.). Meets 2nd Wed./monthly, 8 a.m., Lyon's Rest., 1000 Howe Ave., Sacto. CA. Info: Paul Wolf, W6RLP (916)489-8112. 12/00

Shasta Cascade Amateur Radio Society, (SCARS). P.O. Box 493549, Redding, CA 96003. Meets: 3rd Wed./monthly (Sep-May), 7:30 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 3/01

Sierra Foothills ARC. P.O. Box 1005, Newcastle, CA 95658. Meets 2nd Fri./monthly, 7:30 p.m., Auburn Library (Beecher Rm.), 350 Nevada St. Thurs. nets 7:30 p.m. 145.430(-) PL 94.8, Sun. net 7:30 p.m. 28.415. 6/00

Sonoma County Radio Amateurs, Inc. W6LFJ. P.O. Box 116, Santa Rosa, CA 95402, (707) 579-9608. Meets 1st Wed./monthly, 7:30 p.m., Agilent Tech., 1400 Fountain Grove Pkwy , Santa Rosa. Net ea. Tues., 7 p.m. W6SON. Rptr. 146.73(-) PL 88.5. www.cds1.net/scra 12/00

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 8/00

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8:00p.m., 50.150. FM Rpt. Net Thurs., 7:30 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300. Net Sun., 10 a.m. 50.40. 12/00

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 2nd Tues./monthly, 7:30 p.m., NW Modesto Police Station, 2005 Evergreen, Ste. 600. Net 1.2+4 Tues. 7:30 p.m. 145.390(-) PL 136.5 2/01

Tehachapi-Southern Sierra ARS. Meets 2nd Thurs./monthly, 7 p.m., except July, 125 East F St., Tehachapi, CA (Veteran's Hall). Info: KD6KMN, (661) 822-5995. www.ssars. net, 147.06(+), 224.42(-) PL 156.7. Pkt 145. 090(S) connect to W6PVG-7. ARES nets 7 p.m. 147.51(S) Mon. 1/01

Trinity County ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County Sch. Adm. Bldg., Weaverville, 7:30 p.m. Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. 2/01

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th, San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m. 8/00

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St., Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Jim Bollington, (707) 446-4347 5/00

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., The Lewis Cntr, 20702 Thinderbird Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-) 3/01

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. Office, 17210 Oak St., Fountain Valley, CA. Info: Jane, KD6ODV, (714) 531-6707 2/01

Westside Amateur Radio Club. P.O. Box 11092, Marina del Rey, CA 90295. Meets 4th Tues./monthly, 7:30 p.m., W. Dist. R. C. Bldg., 11355 Ohio Ave., W. L.A., CA (VA Cntr. grounds). Net Tues., 8 p.m. 146.67(-) except mtg. night. Website: http://www.qsl.net/wa6rc Voice Mail: (310) 478-7555 9/00

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. 2 NW Willits http://www.saber.net/wars. Talk-in: 145.13(-), PL 103.5. 9/00

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Davis Explorit! Science Cntr, 3141 5th St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 3/01

COLORADO

Boulder Amateur Radio Club (BARC). Meets 3rd Tues./monthly, 7:30 p.m., NIST rm 1107, 325 So. Broadway, Boulder, CO. Talk-in:146.70(-). Info: (303) 380-6540, e-mail: BARC5Ø@arrl.net or www.thisistrue.com/barc.html 8/00

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7 p.m., St. Lukes Lutheran Church of Gales Ferry on Rt. 12. Info: B. Dargel, KA1BB, (860) 739-8016. 8/00

Western CT. DX Club. Meets 1st Tues/monthly, 8 p.m., Brookfield Com. Cntr. (on Pocono Rd. across from Brookfield P.O.) Info: contact Victor at: victoras@EROLS.com 8/00

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Marchman Tech. Ed. Cntr., 7825 Campus Dr., Bldg. C, Rm C122, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 11/00

Lake Monroe Amateur Radio Society. P.O. Box 151353, Altamonte Springs, FL 32715. Meets 1st Thurs./monthly, 7:30 p.m., Casselberry Sr. Cntr., Lake Triplett Dr., Casselberry, FL. Info: K. Lambert, KB4DCR, (407) 359-7767 10/00

Port St. Lucie ARA. Meets 2nd Fri./monthly, 7:30 p.m., St. Andrews Church, Prima Vista Blvd., Port St. Lucie, FL. Contact: Roy Cox, KT4PA, (561) 340-4319. www.qsl.net/pslara or 146.955-. 11/00

South Brevard Amateur Radio Club. P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tue./monthly, 7 p.m., Public Library, 540 Fee Ave., Melbourne, FL. 12/00

GEORGIA

Cherokee Capital ARS. Meets 2nd Tue.monthly, 7 p.m., New Echota Methodist Church, 488 Red Bud Rd., Calhoun, GA. 146.805(+). Info: Felton Floyd, AF4DN, (706) 629-0369. 1/01

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4BD, 706/673-2291. 5/00

Gwinnett Amateur Radio Society, (GARS). P.O. Box 88, Lilburn, GA 30048. Meets 3rd Thurs./monthly, 7:30 p.m., Gwinnett Central Baptist Church on Gwinnett Dr., Lawrenceville, GA. 147.075+ PL 82.5. Contact: Mike Swiderski, K4HBI, (770) 449-0369. 8/00

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721. Meets 2nd Sat./monthly, 2 p.m., Keaau Community Ctr., behind Fire Station on Old Volcano Rd., Keaau. Talk-in on 146.88(-). Lunch, 11 a.m. Fridays, Hilo Hawaiian Hotel - Queen's Court Restaurant. 9/00

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elementary. School, 615 Auwaiolimu, Honolulu. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 146.88,146.98(-), 146.94(-). Info: (808) 256-6001, WH6CZB. 12/00

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Botanical Garden., Kaneohe, HI. Info: (808) 235-3042. http://www.chem.hawaii.edu/karc/ 8/00

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-) PL 107.2/224.10/224.18/443.75 PL 114.8. Ham help line: (773) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 8/01

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Fire Station #3, between 59th & 63rd, Westmont, IL. Net Sun., 9 p.m. on 145.250. W9DUP rpts. 145.25(-) 107.2PL, 442.550(+) PL 114.8, 224.68(-). Info: (630) 985-9256 10/00

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 8/00

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612-3508. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 8/00

Schaumburg ARC. P.O. Box 68251, Schaumburg, IL. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (630) 612-9446. http;//members.aol.com/sarcradio 10/00

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+). 5/00

Wheaton Community Radio Amateurs, (WCRA). P.O. Box QSL, Wheaton, IL 60189. Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Wheaton, IL. Rptrs: 145.39(-) (107.2), 224.14(-), 444.475(+) (114.8). Info: Ron Hensel, K9ZE, (630) 365-0213, k9zze@aol.com 8/00

LOUISIANA

Baton Rouge ARC. Meets last Tue./monthly, 7 p.m., Catholic High School, 855 Hearthstone Dr., Baton Rouge, LA. Net: 146.79MHz, 8:30 p.m. Sun. www.brac.org. E-mail: W5GIX@aol.com. 11/00

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699. 6/00

MARYLAND

Maryland Mobileers Amateur Radio Club (MMARC). P.O. Box 935, Severn, MD 21144. Meets 1st Fri./monthly, 7:30 p.m., Baldwin Hall, Generals HWY, Millersville. Info net each Mon. 8:30 p.m. on 146.805(-), tone 107.2 Hz 5/00

MASSACHUSETTS

Genesis Amateur Radio Society. P.O. Box 1234 Plymouth, MA 02362. Meets last Mon./monthly, 7:30 p.m. at Plymouth Airport, So. Meadow Rd. Tues. net: 146.685, W1LM, 8 p.m. 7/00

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 3rd Thur./monthly, 7:00 p.m. at Wakefield Public Library, 345 Main St., Wakefield, MA, Sept. to May. Info: Jim Chamberlain, N1AKG, (781) 944-5098. 5/00

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./monthly, 7:30 p.m., Civil Air Patrol Bldg., Lenawee Co. Airport, Cadmus Rd., Adrian. ARES net Sun., 9 p.m. 145.37(-). Info: Neil Griffith, KC8DAR, (517) 263-5774. 6/00

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 733-2082. 3/01

Hiawatha Amateur Radio Assoc. of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m., 108 Stratofort, K.I. Sawyer AFB, MI. For info contact: Richard Schwenke, N8GBA, (906) 249-3837. 10/00

MISSISSIPPI

Jackson Amateur Radio Club, Inc. Meets 3rd Thurs./monthly, 7 p.m., Am. Red Cross Bldg., Riverside Dr., Jackson, MS 39202.11/00

West Jackson County ARC, Inc. Meets 3rd Tues,/monthly, 7 p.m., Ocean Springs Crt. Rm., Ocean Springs, MS 1/01

MISSOURI

Macon County ARC. P.O. Box 13, Macon, MO 63552. Meets last Wed./monthly, 7 p.m., Macon R-I High Sch., rm.167. Net every Thurs., 8:30 p.m. 146.805. E-mail: nøpr@arrl.net 1/01

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 1st Sat./monthly, bkfst. mtg. 10 a.m., Chicago Hot Dog Drive In, 1078 No. Rancho Dr., Las Vegas, NV. after AES swap meet. Club info: Jim Frye, NW7O, (702) 456-5396 or Bill Scarborough, WA6ASI, (702) 269-9551. 8/00

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Minden Med. Cntr, Hwy 395 & Ironwood Dr., Minden, NV. Info: George Uebele, WW7E, (775) 265-4278, ww7e@arrl.net, Rpt. 147.330 MHz. 1/01

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 8:30 a.m., JM Restaurant & Grille, 1885 S. Virginia, Reno. Info: (702) 356-8200. Call on 147.30(+) MHz.. 5/00

NEW HAMSHIRE

Port City Amateur Radio Club, (PCARC), W1WQM. P.O. Box 1587, Portsmouth, NH 03802. Meets 1st Wed./monthly (Sept.-June), The Edgewood Ctr., 928 So. St., Portsmouth. Rptr. 146.805(-) PL 127.3, 110.9, 88.5. 11/00

NEW JERSEY

Bergen Amateur Radio Association, (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 146.79(-) 9 p.m. Wed. 6/00

The Garden State Amateur Radio Assoc., (GSARA). Meets 1st & 3rd Wed./monthly, 8 p.m., MARS Bldg., Fort Monmouth, NJ. Info: B. Buus, W2OD, (732) 946-8615.12/00

South Jersey Radio Assoc., (SJRA), K2AA. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed), Bloomfield Fire Hall in Pennsauken, NJ. Talk-in: 145.29(-) rptr. 8/00

NEW YORK

Amateur Radio Association of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2SEX. 2/01

Genesee Radio Amateurs, (GRAM). P.O. Box 572, Batavia, NY 14021-0572. Meets 3rd Thurs./monthly, 7:30 p.m. (except Jul, Aug, Dec), Am. Red Cross, 220 East Main St., Batavia, NY. URL: http://hamgate1.sunyerie.edu/~gram 5/00

Hall of Science Amateur Radio Club. P.O. Box 150131, Kew Gardens, NY 11415. Meets 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Voice mail (718) 760-2022. 3/01

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. Net 9:15 a.m. Thurs. 3853 MHz. 5/00

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ. P.O. Box 1052, New York, NY 10002. 24-hr. hotline: (516) 674-4072. Fax: (516) 674-9600. E-mail: crew@wb2jkj.org. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us—"Class-room Net," 7.238 MHz, 7 a.m. E.S.T. PSE QSL! 10/00

South Towns Amateur Radio Soc. (STARS). Meets 1st Thurs./monthly, 7:30 p.m., Hamburg Youth Cntr, Prospect Ave.Hamburg, NY (exc. Jul, Aug @ NIKI Base). Info: N2TEZ, 180 University Ave., Depew, NY 14043. Web: www.cmp-express.com/stars. Rpt: WB2ELW 147.090(+) PL107.2 11/00

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Info: W.S. Black, KB2YAP, (516) 289-5587. 5/00

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 10/00

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.150(+). 2/01

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Ph: (704) 888-4815. Web page: www.qsl.net/SCARC/ 5/00

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Vo-Ed School, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 1/01

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 10/00

Western Reserve Radio Assoc. P.O. Box 81252, Cleveland, OH 44181-0252. Meets 2nd Wed./monthly, 7:30 p.m., Jenkins Communications Cntr., Main St., Olmsted Falls, OH. Info: C. Bade, W8CJB, Sec., 146.73(-), 444.900(+) MHz. 10/00

OREGON

Central Oregon Radio Amateurs, Ltd. (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thur./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. 146.940(-) MHz. Info: (541) 388-3831. 10/00

Hoodview Amateur Radio Club. P.O. Box 20624, Portland, OR 97220. Meets 3rd Thurs./monthly, 7:30 p.m., Mt. Hood Com. College/Gresham, Rm 1001. Rptrs: 147.28(+), 448.475(-5) (tone 167.9) 5/00

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Court House, Rm. 310, Roseburg, OR. Info: WØQOT/R 147.12(+) (PL100) or (541) 863-7692. 7/00

PENNSYLVANIA

Mercer County ARC, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.Ø5. 6/00

Mid-Atlantic ARC, (MARC), WSNWA. Meets 3rd Thurs./monthly, 8 p.m., Radnor Mem. Library, Wayne, PA. Rtrs 147.06, 145.13. Net, Sun., 8:30 p,m, http://www.marc-radio.org 11/00

TEXAS

Brazos Valley Amateur Radio Club, (B-VARC). P.O. Box 1630, Missouri City, TX 77459. Meets 1st Thurs./monthly, 7 p.m., Sugar Land Community Ctr., 226 Matlage Way., Sugar Land, TX. 12/00

VIRGINIA

Mt. Vernon Amateur Radio Club, (MVARC). Meets 2nd Thur./monthly (except Dec.), 7:30 p.m., Mt. Vernon Gov. Cntr, 2511 Parkers Ln., Alexandria, VA. Contact: Bob, KT4KS, (703) 765-2313. E-mail: mvarc@juno.com, http:/www.mvarc.org/, Net: Tues. 8:30 p.m. 146.655-. 10/00

Ole Virginia Hams ARC, (OVH). Meets 3rd Mon./monthly, 8 p.m., Northern Virginia Electric Coop. Tech Cntr, 5399 Wellington Rd., Gainesville, VA. Info: Mary Lu, KB4EFP, (703) 369-2877. http://www.qsl.net/olevahams 3/01

Portsmouth ARC. Meets 4th Thur./monthly, 7:30 p.m., Am. Red Cross Chapter house, 700 London Blvd., Portsmouth, VA. Talk-in 146.850. Info: C.I Clements, Pres. (757) 484-0569. http://www.series2000.com/users/wa4nvi/parc/htm 5/00

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Sal. Army Com. Bldg., Hampton, VA. Rptrs 146.73(-), 449.55(-). VE Exam Info: (757) 898-8031, W4RTZ. 3/01

Virginia Beach ARC. Meets 1st Thurs./monthly, 7:30 p.m., Virginia Wesleyan College, Wesleyan Dr. off N. Hampton, Village 2 Commons, Graybeale Bldg., Virginia Bch, VA . 2/01

WASHINGTON

The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) (103.5 CTCSS) rptr. Doors open 9:30 a.m. 5/00

WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., Saint John Episcopal Church of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. Info: D. Tennant, N8ZYB, Rt. 1, Box 188, Mt. Alto, WV 25264. 7/00

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7p.m., Museum of Radio & Tech., 1640 Florence Ave., Huntington, WV 25701. (304) 525-8890. 5/00

WYOMING

University ARC. Meets 1st Tues./monthly, 7:30 p.m., University of WY, Engineering Bldg., rm. 2100, Laramie, WY. 146.01/61. 12/00

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More About QCWA

The QCWA column in *Worldradio* for January 1999 ("what is QCWA?") was a short history of our organization primarily for those readers who were not at the time members of QCWA. In this column we introduce you to QCWA's Home Page on the Internet. Like many other home pages, "page" is a misnomer — you could spend all day exploring the site and its links to other relevant sites, and still want to come back for more. The site is available using almost any Internet browser — the address is http://www.qcwa.org.

When you access the site your attention is drawn to publicity on the QCWA year 2000 convention (Toronto on 13, 14 and 15 October). Y2K Convention topics include the program; hotel rates; the banquet; about Toronto tours; registration; currency; border crossing; special event station VA3QCW; and the Delta Hotel, the "host" hotel. In all, there are three pages of information on the Convention including a registration form. The theme is "Celebrating Radio's First Century"; the host Chapter is Southern Ontario Chapter 73.

Speaking of QCWA Chapters, the Web site also includes a list of the approximately 200 QCWA Chapters, which you can download. The list is arranged by the state in which the Chapter Secretary lives, and indicates the Secretary's name, call and postal address.

Another handy reference is the list of all QCWA on-the-air meetings arranged in order of the Chapter number, day of the week, time and frequency of the net, and the net NCS (in some cases there are several NCSs — such nets are labeled "varies").

The year 2000 will mark the 44th year of QCWA QSO parties. By the time you read this, the spring party (which occurs in March) will have taken place, but you'll have an opportunity to participate in the fall activity on 16 September.

Like many other Web sites, the QCWA site includes links to other sites pertaining to Amateur Radio. One of these is K1DWU's Ham-Links Collection. This link lists more than 70 categories of information, and the number of items in these categories is more than 4,400! The number of items in each category ranges from 1 under Aurora to 401 under Boat Anchors/Antiques to 1,074 under Clubs. The 27 items under Propagation, listed below, will give you some idea of the scope of individual items.

AD5Q's Propagation Forecast

Australian Ionosphere Prediction Service Australian Space Forecast Centre

Communications Analysis Prediction Wizard Current Solar Images at NOAA

Ham Radio OnLine Magazine Propagation Resource list

Ham Radio OnLine Magazine World Wide Propagation Conditions

High Frequency Active Auroral Research Program Ionospheric Physics Group

K-Index Plot - U. S. Air Force Space Forecast Center K1TTT MOF/LOF Propagation Program

Latest Solar Images from NASA

NOAA Current Solar Forecast (SF & A indices) NOAA's radio informatrion page (for radio operators) Primer on the Space Environment

Propagation Models and Prediction Software SOHO - Solar and Heliospheric Observatory Solar Activity Report from IPS

Solar and Upper Atmospheric Data Services Solar Flux

Solar Terrestrial Activity Report

Solar Terrestrial Physics Division of the NGDC Solar Tower at Mt Wilson Observatory

Space Environment Center (NOAA)

Sunrise

Sunspot Index Data Center

Today's Space Weather from NOAA.

In addition to the Web site we have inaugurated an Internet e-mail list for QCWA. Access details are on page 17 of the winter 1999 issue of the QCWA Journal and are repeated below. It's a lot like talking over the back fence with your neighbor, or having that long rag chew with the gang on 20 Meters, except you don't have to be there all the time to join in. It is a great way to have questions answered or just to float ideas.

To join the list is very simple. Go to http://www.qth.net and select QCWA from the list. Enter your e-mail address and click on subscribe. (Please use your personal address: An e-mail address that is forwarded, such as addresses providing automatic forwarding of e-mail to members of a large organization via their personal e-mail addresses is the kind of address that some people misuse to send SPAM or unsolicited e-mail telling you how to get rich quick. The owner of the server is doing everything he can to prevent this from happening; and he is doing a very good job!).

In response to your "subscribe" message, you will receive a message asking if this is what you want to do. Send back the reply the way it instructs you to do and you will receive an intro message. You will then receive every message that is sent to the list. The intro message will tell you how to submit messages to the list.

Do pay us a visit. — we think it will be well worth the effort.

Restructuring, CW, and other thoughts

On 30 December the FCC announced its decision to de-emphasize radiotelegraphy in the Amateur Radio licensing process. While the Commission based its decision on a variety of factors, part of its justification was the mistaken "position" that CW was no longer of value for emergency communications. Ironically, this position was debunked approximately 24 hours later while we were sitting in the Michigan State Police Emergency Operations Center at Lansing, Michigan, assisting with the "Y2K" operations.

During the Y2K operation, the High Frequency SSB circuit was having great difficulties. Many stations couldn't be heard, due to extremely poor propagation conditions and significant interference, both coincidental and malicious. In many cases, traffic simply couldn't be received due to the poor quality of the SSB circuit.

Interestingly, sitting right next to the SSB operator was a representative of the Michigan "QMN" CW Net. Ironically, he was having no difficulty. This operator was totally relaxed, copying message after message on the "mill" (typewriter), rarely asking for fills! In some cases, he was sitting back, monitoring the net, eating a snack, while the poor gentleman operating the SSB position was struggling to copy traffic with headphones clamped to his head! In the end, the CW Net handled as much traffic as the SSB net in approximately 25 % of the time. In other words, CW was nearly FOUR TIMES AS EFFICIENT AS PHONE.

This situation is not unique, either. Over the past year, the State of Michigan conducted a number of exercises involving statewide VHF packet radio and HF communications in anticipation of "Y2K." More than once, CW proved itself superior to SSB and digital modes for traffic handling when conditions were poor. Many radio amateurs who once held the opinion that CW was obsolete are now taking a second look at this "old-reliable," only this time, they're somewhat more open minded!

It is understood from other states that some 75-meter SSB operations were experiencing similar difficulties during "Y2K" operations. Likewise, in many of these cases, CW circuits operating at the same time appeared to be operating normally. Unfortunately, the prejudice of so many in the ARES/RACES programs often resulted in the under-utilization of this valuable resource.

A second look?

We can only hope that the Commission's recent decision will "defuse" the rather explosive debate about radiotelegraph testing for a time. Perhaps, over time, "cooler" heads will prevail so that we can take an unbiased look at the many advantages of CW. The simple fact is, there is much to be said for such qualities as:

- Simplicity of equipment
- Narrow bandwidth
- Readability and accuracy

I have often wondered if such operations as the hurricane nets on 20-meter SSB would not be wise to operate a parallel CW circuit for weather reporting.

The use of such NTS techniques as a standard message format combined with the advantages of CW would probably work quite well if enough volunteers could be found. CW would also seem ideal for stations operating on emergency power with temporary antennas in a disaster area.

What about SSB?

The preceding comments about the value of CW were not intended to imply that SSB nets were not as "good" as CW circuits. SSB nets can do some things that CW nets simply can't do. Likewise, when conditions are good, a SSB net can handle lots of traffic. The simple fact is this; each mode of communications has advantages and disadvantages.

The Y2K experience in Michigan has taught many an important lesson about placing "all of one's eggs in a single basket." The hard part will continue to be encouraging our ARES and RACES programs to develop the skills to insure that a diversity of modes are available for disaster communications.

Opportunity:

Whether or not one agrees with the decision of the FCC, the universal 5 wpm code test is now a permanent part of Amateur Radio. The nearly "instant" upgrade afforded so many will bring tens of thousands of new operators to the HF Bands. This influx of new operators affords NTS programs and independent nets a wonderful opportunity for recruitment. Section Traffic Managers and SSB net managers should be considering methods to promote NTS and encourage these new operators to participate. Now is your opportunity to talk to Amateur Radio clubs and ARES groups, advertise on 2-meter nets, and generate direct mail to let these individuals know about your net.

New operators will bring a great deal of enthusiasm to their new privileges. This enthusiasm will provide many opportunities to generate new traffic outlets, new and innovative NTS programs, and improved emergency communications. Likewise, many of these operators will be looking to those who are already active on the HF bands for guidance on proper operating procedures. Let's make a point of setting an example of courteous and polite operating practices.

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One final point — regardless of your opinion about restructuring, let's not differentiate between those who passed a 13 or 20 wpm code test and those that didn't. Ultimately, whether or not restructuring is good for Amateur Radio is up to us. If we welcome new operators, assist them with sound advice, and encourage them to operate in a professional and courteous manner, we will insure that Amateur Radio will remain healthy and prosper.

Let's use restructuring as an opportunity to improve Amateur Radio. Who knows, if our CW operators take the time to show these newly upgraded folks the significant advantages of the mode, perhaps they will even take the time to learn code and take advantage of its many benefits.

Why use the NTS Radiogram format?

In a recent editorial piece in *QST* magazine, Jerry Boyd suggested that a standard message format is no longer necessary for emergency communications. I had hoped that the ARRL would provide a similar profile for an article expressing an opposing viewpoint. Unfortunately, the best we got from the League was an opposing viewpoint from Bill Thompson, hidden in the "Letters to the Editor" section of *QST*.

In his *QST* article, Mr. Boyd correctly stated that standard message format, Q-Signals, and 10-codes have little relevance in modern public safety communications. This position isn't new; it has been advocated by experts in the field of public safety communications for years. This is true because most public safety communications are tactical in nature. However, disaster communications can be a "different animal."

Disaster communications can generally be broken down into three categories:

- Tactical communications
- Record Message Traffic
- Specialized modes (e.g. ATV, APRS, etc.).

Tactical communications essentially directs an individual or unit to proceed to a specific location, perform a specific task, or respond immediately to a given situation. This communications is typically conducted in real time as events unfold. A dispatch to a police car or fire unit is a typical example of this type of communications. It becomes obvious to even the most casual observer that this type of communications does not require a standard message format and is best handled in "plain language" as Mr. Boyd suggests. All that is required in these cases is an accurate radio log or electronic recording.

Message traffic however, is a different animal. Some disaster messages pass through several hands before delivery to a third party, such as a disaster official, is effected. Delivery of such messages may be delayed due to heavy traffic loads, improper routing within an Emergency Operations Center, or similar circumstances. When these situations occur, intuitive knowledge of critical message content cannot be assumed! Consider the following example:

During a disaster operation, several hundred operational messages are transmitted between a disaster site and various support facilities located some distance away. Each message is addressed to a different department or disaster official. As these messages are routed to various emergency operations centers or delivered by telephone to the recipient, delays occur. How does the addressee know what time the message was originated? Is the message an hour old? Is it three hours old? If it's a status report, is it more up-to-date than previous messages received? Without a date-time group as provided in a standard message format, such questions may remain unanswered!

Given the circumstances above, what should one do if it is necessary to contact the originator of a specific message in order to request clarification or obtain a better address? Lacking a message serial number or date-time-group as provided in a standardized message format, the originator must read dozens, if not hundreds of messages in an attempt to identify the specific message for which clarification is requested! Reference to a specific serial number or date-time-group, as provided by a standardized message format, eliminates this problem, thereby improving operational efficiency.

While it is true that most Amateur Radio emergency communications is of the "tactical" variety, situations will arise which require delivery of critical messages to a third party. Under such circumstances, knowledge of where the message originated (i.e. "place of origin"), the time it originated (i.e. "time of origin") and so forth may be of critical importance. Formats such as the NTS radiogram form provide all of this important information.

Today, many computerized modes allow automatic date and time stamping of a message as well as automatic attachment of routing information. However, many situations remain, particularly during disasters, in which origination or final delivery of critical traffic occurs on a VHF-FM frequency or SSB/CW Net. Do we run the risk of losing this information at such a critical point because the operators involved are unaware of a standard format?

My experience during recent disaster operations has led to a much different conclusion than that of Mr. Boyd. I have seen many recent cases where the effectiveness of amateur communications has been significantly diminished by the lack of a standard message format. In many of these cases, the use of the NTS format would have solved significant problems related to insufficient information.

I will conclude with this thought: While modern technology has made it possible to transmit dozens of pages of operational messages in a matter of seconds, someone must still read, process, and deliver this traffic. It is at this stage that the system is most likely to break down. The use of standardized message formats does much to prevent the loss of critical information at this stage. Perhaps this is the reason the armed forces, despite adoption of modern data communications technologies, still use standardized message formats for record message traffic.

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Contest winners

It was great fun to research and write my last article on the average age of USA-CA holders. In fact, it's given me an idea for an ongoing series of articles. First, let me digress. Ever wonder how many "Chicken Soup for the Soul" books can be published? Seems there's a new Chicken Soup for the Soul book every time you turn around. I was entering an airplane recently and noticed a copy of "Chicken Soup for the Golfer's Soul." I guess everyone has a soul, everyone is an individual in thier own right, and everyone has a hobby or fetish, so therefore everyone deserves a Chicken Soup book, right? So, how much longer do you suppose it will be before we see a "Chicken Soup for the Amateur Radio Operator's Soul"? Or "Chicken Soup for the County Hunter's Soul"? Very important people with inquiring minds are asking these very questions, right now! I'm not sure who these people are, but they're out there and believe you me, our time will come when we will have our very own "Chicken Soup for the Soul" book. Then we'll know we've made it into the big leagues!

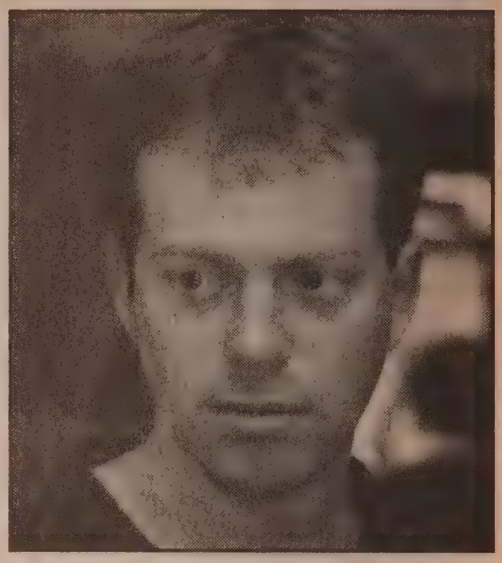
So anyway, back to my idea for a series of articles. I researched the average age of USA-CA holders which was a calculation of the county hunter's age when they received the award for contacting all counties the first time. See where I'm going with this? County Hunters don't stop after they've achieved all counties a first time, they keep on going — kinda like that little bunny. You might better understand why county hunters do this if we had our very own Chicken Soup book for you to read. Or maybe if we had our very own Chicken Soup book, we wouldn't keep hunting counties after the first time. Hmmm, I may be on to something.

I'm thinking there are a lot of folks wondering what is the average age of County Hunters when they contact all counties a 2nd time, 3rd time, 4th time, 5th time, 6th time, etc. Right? Tell me that doesn't make you want to keep reading my columns to find out that very important bit of trivia. Well of course it does and I know you would admit it too. So, that's exactly what I'm going to do — calculate the average age of 2nd timers, 3rd timers, 4th timers, 5th timers, 6th timers, 7th timers, 8th timers, and 9th timers (I'd keep going, but we don't have any 10-baggers yet!) Just think, I can also calculate the amount of time it takes to contact all counties over-and-over-and-over again. This is where you say, "way cool!" Stay tuned, that quality reading entertainment is coming your way in a future column.

USA-CA holder age contest

Just to whet your appetite for more of the same type of quality reading entertainment, I thought I'd share with you the results of a contest I ran in the County Hunter circles. Did I mention yet that my March 2000 County Hunter column included a calculation of the average age of USA-CA holders? I had so much fun with the article that I wanted to share the fun with the County Hunters. Through the internet (County Hunter forum and County Hunter reflector) and the *Roadrunner* (the MARAC newsletter), I advertised a contest for County Hunters. It was a Guess the Average Age of USA-CA Holders Contest! ***Worldradio*** offered five one-year subscriptions to the winners.

From 06 January - 12 February, I continuously advertised the contest and by the deadline I had received 103 guesses. Here are some statistics for those guesses. The low guess was 38.3 and the high guess was 68.7. The mean average guess was 57.0, the median average guess was 57.5, and the standard deviation of the guesses was 5.6 years.



Ace Jansen, N3AHA, your County-Hunting columnist.

For the March column, I had collected 880 of the 983 USA-CA holders and calculated the average age of USA-CA holders as 53.4. All in all, the average guess during the contest was pretty close.

Before announcing the winners, Tim Heger, N3XX, deserves honorary mention. Tim actually spent the time to search and find 830 birthdates and calculated an average age instead of making a quick guess. Unfortunately, his calculated answer of 52.9 (0.5 years off the mark) put him 8th closest for the contest. It was a shame to not have a prize for Tim as he was still awfully close.

Each of the below county hunters will receive a one-year subscription to ***Worldradio*** magazine.

Place	Call	Guess	Off
5	KN4Y	53.8	0.4
	KC3X	53.0	0.4
	VE1BES	53.0	0.4
4	AI5P	53.1	0.3
2	N1API	53.2	0.2
	N4CD	53.6	0.2
1	WX4KY	53.4	0.0

County Hunters probably recognize all of these calls except WX4KY. WX4KY is the Central Kentucky Skywarn Group and the trustee is county hunter Harry, KN4S. Harry offered Tim his winning subscription since Tim worked so hard to research the birthdates. Tim declined, stating doing the research and seeing how close he could get to the answer was great fun and he wanted Harry to keep the subscription. Yet another example of

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County Hunter generosity.

MARAC 2000

The Mobile Amateur Radio Awards Club (MARAC) is throwing a party and you're invited. The 32nd annual MARAC Convention will be held in Midland, Michigan from 05-08 July 2000. Like all MARAC conventions, there will be a good mix of County Hunter business and fun — something for everyone. The annual banquet is when the MARAC recognizes the County Hunters of the Year (one for SSB and one for CW), as well as two Mobile Operators of the Year and two Net Controls of the Year.

Registration begins on Wednesday, 05 July and the fun kicks off with an early-bird picnic in the park sponsored by the Midland Amateur Radio Club. For those who arrive on the 5th, this is a great opportunity to share "on the way to the convention" mobile stories. On 06 July, a Mackinac Island trip is planned. This includes taking a ferry to the island, spending a day on the island, then spending some time shopping in Mackinaw city. On 07 July, a day in Frankenmuth is planned, including shopping in the world famous Bronner's and a luncheon at the Bavarian Inn with entrees featuring the heritage of the Frankenmuth settlers.

On 06 July and 08 July there will be a doll making party hosted by Secrist Toys, Inc. Secrist Toys is a Midland county "kit" doll industry.

County Hunter seminars are planned for 06, 07 and 08 July with the annual group photos planned for 08 July. Also on the 8th is the MARAC officers meeting, the annual membership meeting and the awards banquet.

For additional information, check out the web site on www.countyhunter.com/n8stf or contact MARA MI-2000 National Convention at P.O. Box 520, Merrill, MI 48637-0520.

D & J Awards

On 15 December 1999 all County Hunter awards formerly administered by the B & B Shop with rights, privileges, and copyrights were transferred to D & J awards. D & J Awards intends to continue the tradition of integrity and recognition that was established by Bill Nash, WØOWY. This includes offering the seven awards previously offered by the B & B Shop. The Big Rig Award is offered for county contacts with truck drivers (18 wheelers). The Fourth Time Award (IV Award) is available for contacting all counties a 4th time and the Fifth Time Award (V Award) is available for contacting all counties a 5th time.

The Five Star Award is an award for contacting stations who have worked all counties. Stars are calculated based on the awards held by the County Hunter, including the *CQ* magazine/MARAC First, Second, and Third Time Award, D & J's The Fourth Time Award (IV Award), or D & J's The Fifth Time Award (V Award). Holders of the *CQ* magazine USA-CA award are good for one star, holders of the 2nd time award are good for two stars, etc. To achieve the Five Star Award, County Hunters must make contacts totaling five stars for all counties.

The DO-AZ Award (Do Arizona) is an award for contacting all Arizona counties with Arizona residents or transmitting from all Arizona counties.

The Nth Time Award is an award for working all counties more than five counties. In other words, you don't have to ever stop hunting counties. One individual has received the Nth Time Award for contacting all counties a ninth time.

The Millionaire Award is an annual contest to encourage maximum mobile operation during the weeks preceding the MARAC convention.

D & J also holds the rights to the Run All Nebraska/Worked All Nebraska (RANWAN) Award for anyone running all Nebraska or contacting all Nebraska counties. A Next to Last County Award is also available for the mobile operator who gives out the next to last county to help a County Hunter finish all counties for a given state.

For rules and further information on the awards or applications, please send an SASE to D & J Awards, P.O. Box 7994, Sumner, WA 83390-7994.

County Hunter Nets

By the way, I haven't been mentioning the County Hunter nets enough in my recent columns. For you newbies, don't forget to listen for County Hunter activity on the 20-meter County Hunter nets; 14.336 and 14.0565 MHz. Occasionally, there's also activity on 40 Meters, 7.238 or 7.243 MHz on SSB or 7.039 on CW. Until July, happy hunting!

73 Ace N3 aha!

— Ace Jansen, N3AHA, 42857 Hollywood Park Place, Ashburn, VA 20147; email: jansens@tidalwave .net.

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Another FM repeater - Oscar 14

Hi Everyone! Welcome to Spring, 2000 — in the last year of the Twentieth Century! Ok, I know we've beaten the Y2K thing to death, but in case anyone is still confused about whether it's really the 21st century or not, I thought I'd start out this quarter's installment here with a short note that should clear it up for everyone.

The U.S. Naval Observatory reports on its web page that despite all the hype made by the media as well as many political and religious leaders, we have NOT entered a new decade/century/millennium with the ushering in of the year 2000! To the contrary, the end of the second millennium and the beginning of the third will be reached on 01 January 2001. This date is based on the now globally recognized (but apparently not globally understood) Gregorian calendar, the initial epoch of which was established by the sixth-century scholar Dionysius Exiguus, who was compiling a table of dates of Easter. Rather than starting with the year zero, years in this calendar begin with the date 01 January 1 AD (Anno Domini, the year of Our Lord). Consequently, while 2000 may be considered a Millennium Year, the next millennium does not begin officially until 01 January 2001 AD. Additional information (for those still not convinced) is available from the Royal Greenwich Observatory at: http://www.rog.nmm.ac.uk/leaflets/new_mill.html.

Phase 3D

Now that that is finally clear, there's a bunch of exciting news to report this time around. Most exciting for all of us is the news that we have an approximate launch date for Phase 3D!

According to AMSAT, Phase 3D has been tentatively scheduled to launch in late July. The launch is listed in the "Provisional Ariane Launch Manifest" for February through July of this year appearing in the February edition of the Arianespace newsletter (http://www.arianespace.com/news_espace.html).

If the schedule holds, the Phase 3D satellite would be sent aloft on Ariane 507, flight V132. The specific date will be announced as we get closer to the launch.

Currently, P3D is at the European Spaceport in Kourou, French Guiana. It will be stored in its shipping container, housed in an air-conditioned integration building at the launch complex until launch preparations commence. All systems have been shut down and the batteries left uncharged.

Let's all keep our fingers crossed for luck and maybe we'll finally get the next generation of amateur satellite into the sky! It will significantly change the way we operate on the birds in the next few years.

I found it interesting that just before the announcement was made concerning the upcoming P3D launch, the AMSAT-BB mailing list started another thread for a newbie on geosynchronous amateur satellites. I've touched on it here before, but since many new people are joining our ranks every day, maybe it's time to talk about orbits and how the birds work once again.

LED of Molniya?

In the amateur satellite service, our satellites tend to line up into two groups: Low Earth Orbit birds (called LEO's) and Molniya Orbit birds (also known as Elliptical or "DX" satellites). Low Earth Orbit sounds just like what it is — an orbit that tends to be in the range of a few hundred miles above the Earth, basically circular around the globe, with an orbit duration of approximately 90 minutes. They move quite fast — with a footprint (area covered on Earth under the bird) covering most of the U.S., and tend to pass by in 10-15 minutes. If using directional antennas, one must be very good with their fingers, or else use a computerized rotor control/tracking system to chase the bird across the sky. However, being so low to the Earth, they are often quite accessible by omnidirectional antennas — I use a discone at my station with very satisfactory results! Additionally, small power levels are all that is needed to get to the birds — ten watts is often more than sufficient; some have even accessed them with handhelds!

The Molniya Orbit birds are in big elliptical orbits around the earth. Try and imagine the earth as a basketball; the satellite is a ping-pong ball in an elliptical orbit that whips around the earth very closely and then shoots way out in the sky. This type of orbit throws the satellite out about 20,000 miles from the Earth at its apogee (farthest point in its orbit), but gets very close to the Earth at perigee (closest point in its orbit). The orbits tend to last 10-12 hours in duration. It basically takes about an hour as it whips around the Earth, then gets way out away from the Earth and "hangs" in the same general area for 8-10 hours of its orbit. The view of the Earth seen from the bird is basically an entire hemisphere — hence the "DX" nature of the satellite. However, since the Earth continues to turn underneath the bird,

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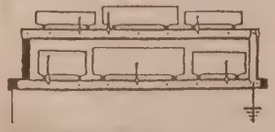

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the footprint covered changes, allowing QSOs with many different areas. Using transponders that allow SSB usage, the operation is very reminiscent of 20 Meters! It's very exciting to hear and use.

A geosynchronous satellite causes many problems. Although it sounds initially like a wonderful idea, a satellite always in the same place, always with the same footprint, there are many situations to overcome. First, there is a single band of space where the geosync birds can go — and this space is governed very carefully by commercial interests. Without geosync birds, we'd have no fancy premium services on TV; our telephone services would be interrupted; weather prediction would be a mess, etc. Consequently, our getting our own "slot" in the geosync area would be slim to none. Could we "piggyback" on an existing geosync? Possibly...however, it would cost a bundle! Commercial birds cost BIG bucks and they utilize every ounce of weight to their advantage. Even though the satellites stay in one place, to KEEP them there, fuel and motors have to be on board these satellites. And they need correction a good bit of the time! The weight of even a low power FM repeater might cause a problem. Additionally, they only cover 1/2 the earth at a time — and they always STAY over that part of the Earth. Would Europeans or Asians support a bird that looked only at the U.S.? Or vice-versa? I think not. A network of three satellites could cover the Earth, but at a huge cost that our service is not willing to bear — YET. Maybe in the future. But for now, the others are easier to use, build, and put into service.

More news.

On 26 January an Air Force Minotaur rocket lifted off right on schedule from the new California Commercial Spaceport at Vandenberg Air Force Base. Three Amateur Radio satellite packages were aboard. JAWSAT (Joint Air Force-Weber State University Satellite) served as a bus for several deployable payloads; Stanford University's Orbiting Picosat Automatic Launcher, or OPAL: Arizona State University's ASUSat, and the Air Force Research Lab's Optical Calibration Sphere.

ASUSat and JAWSAT have Amateur Radio capability, but the tiny, eight-ounce StenSat, to be deployed from OPAL, was strictly an Amateur Radio satellite — designed by Hams, for Hams. It was developed by a group of amateur enthusiasts in the Washington, DC, area as part of Stanford University's OPAL project. Apparently StenSat has some problems. Upon release from OPAL, it began to act erratically and is not operating correctly. ASUSat has already failed and has been pronounced dead. Out of the three JAWSAT is the only one operating normally.

Oscar 14 has been reassigned from a store-and-forward packet messaging satellite to a real-time FM repeater. It is in Mode J, using an uplink of 145.975 MHz, and a downlink on 435.070 MHz. Since it was switched into this mode, UO-14 has become very popular. Unfortunately, its uplink is only 5 kHz below KO-25's uplink, and operators must be careful to watch for any crossing of their orbits when using the bird.

Software

In tracking software news, PREDICT Version 2.0.0 for Linux has been released! PREDICT is a multi-user satellite tracking and orbital prediction program written under the Linux operating system by John A. Magliacane, KD2BD. To find out more about the program, check out the website located at www.linuxfan.com/~predict or a review on it at www.icewalkers.com/softlib/app/app_00750.html . It can be downloaded using anonymous ftp from: ftp://ftp.amsat.org/amsat/software/Linux/predict-2.0.0.tar.gz.

Another thread that caught my eye is for those of you out there trying to use Palm Pilots (and their various knockoffs) to do tracking. Apparently PocketSat is the one to use, and is available in both Pilot & Windows CD versions. More info is found at either: http://www.emmgraphics.com/pilot/pocketsatinfo.html or http://www.emmgraphics/portfolio/pocketsat.html

Give it a try and let me know how it works for you!

I'm out of room for this quarter's installment of Amateur Satellites, so hope to see you all at Dayton (I'll be at the AMSAT booth), or to work you soon on the birds!

— Terry Doudes, WB8CKI, can be reached at: 344 E. Fifth Ave., Lancaster, OH 43130 or via email at: wb8cki@amsatorg.

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NorCal's new SMK-1 transceiver kit

Turning in a direction befitting the new millennium, the NorCal QRP Club has announced the development of an inexpensive 40-meter QRP transceiver kit using state-of-the-art surface mount technology.

The NorCal SMK-1 combines circuitry from the wildly popular Tuna Tin-2 transmitter and MRX-40 direct conversion receiver — two designs that have been part of the low power homebrew mosaic for many years. The hybrid-transceiverizing of these two well-heeled radios was executed by Dave Fifield, AD6A, who took the best of both circuits, made improvements and modifications and settled on what's now the NorCal SMK-1.

If the call sign AD6A sounds familiar, you may remember Dave as the designer of the popular and highly praised NorCal-20 transceiver kit. He's also taken the NC-20 concept, improved it and moved into mainstream commercial QRP kit marketing by founding Red Hot Radio, with its spin-off RH line of QRP transceivers.

The NorCal SMK-1 is on a very short list of surface mount (SM) projects developed by and for the QRP community. And, in a refreshing marshalling of manpower and resources between low power groups, the New Jersey QRP Club has partnered with NorCal to help bring the finished kit to the low power masses. It has created the NJ-QRP SMK-1 Enclosure kit, providing a comfortable, inexpensive, handsome home for the NorCal SMK-1 transceiver.

We've come to expect the unexpected when NorCal's Doug Hendricks, KI6DS, is on the scene. Not surprisingly, his fingerprints are all over the blueprint of the SMK-1 project. By and large, electronic component packaging comes in two widely-used forms — through-hole and surface mount.

Through-hole, of course, is most familiar to QRPers. Components are mounted on one side of a printed circuit board and their leads are pushed through holes to be soldered on the other side.

With surface mount technology, though, components are placed and soldered on the same side of the PC board. There are lots of reasons for SM's popularity, but much smaller sized and lower cost components rank high in their allure. Industry likes SM because of its nice fit in robotic assembly programs.

The NorCal SMK-1 grew from a recent QRPer's query to the Internet Mail Group QRP-L: "When are we going to get out of the dark ages and do a REAL rig surface mount?" the fellow asked.

Doug and NorCal already have a sophisticated surface mount transceiver on the drawing board. It is slated for debut in Fall '00. But he'd been hearing requests from some QRP builders for an intermediate kit that would allow homebrewers to learn SM techniques before the big transceiver hits the streets.

True, some years ago the KnightLites QRP group had done a kit run of the SMITE — an SM version of the little Pixie transceiver. Embedded Research has an SM keyer kit that has been very popular among QRPer's. But much of the QRP community seems to be wondering: "Isn't it time for an SM project that has a bit more 'umph'?"

"I thought of doing the TT2/MRX surface mount on a Friday night," Doug said, "met Dave (Fifield) for lunch at 2 p.m., the next day and he had a working prototype in my hands five days later. How about that for having a product development team already on line?"

They'd settled on a kit with about 85 parts featuring a transceiver with receiver incremental tuning (RIT), transmitter incremental tuning (XIT), sidetone and about 500 milliwatts of output power. Two variable crystal oscillators (VXOs) were employed to give about 5 kHz swing on receive and 2 kHz on transmit, "and they overlap, so true transceiver operation is possible," Doug said.

Of course, the SMK-1 would be centered on the 40-meter QRP calling frequency: 7.040 MHz. The prototype, by the way, has a receiver MDS of about -117dB, "which is fine on 40-meters," Doug said. He cautioned that the SMK-1 "would not be the full-featured rig that is (already) in the pipeline - but it would be perfect as a learning tool."

You've got to believe Doug is on the right track. On a circuit board just 2.5-by-2.25 inches, the NorCal kit is comprised primarily of 1206-style surface mount components (parts that are .12 X .06 inches in size). Doug thoughtfully chose them for two reasons. First, the 1206-style is among the larger of the SM components on the market today, which is good news for people taking their first stab at surface mount construction. Second, 1206 parts are readily available. The wait for some 805-sized components can be as great as a year, he said.

With the exception of the two 7.040 MHz crystals, two trimmer capacitors, and three board-mounted potentiometers, all of the NorCal SMK-1's components are surface mount. Dave Fifield opted to change an LM380 audio amplifier chip in the original MRX-40 receiver circuit design to an LM386

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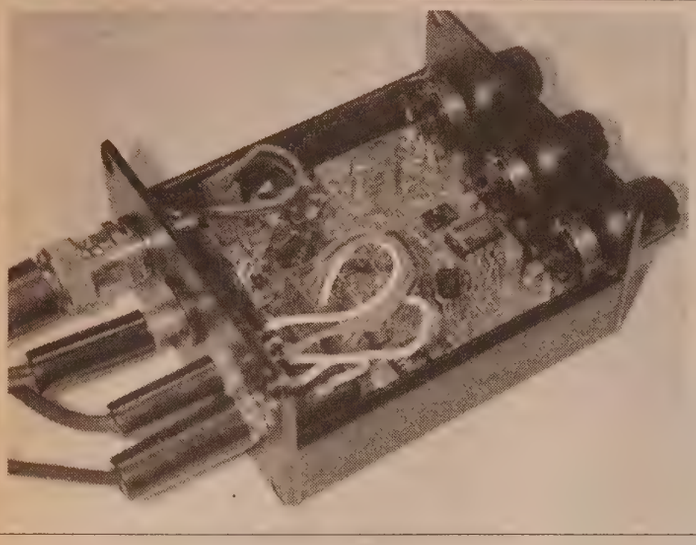


NorCal's SMK-1 QRP transceiver combines the Tuna Tin-2 transmitter and MRX-40 receiver in a surface mount configuration. Photo courtesy of NorCal QRP Group.

in the SMK-1 because the '380 was unavailable in an 1206-style package.

Multiple photographs of the NorCal SMK-1 can be seen on NorCal's web site: www.fix.net/~jparker/norcal.html.

Has this surface mount project resonated with the QRP community? "Guys, the orders (for the SMK-1) are literally pouring into my mailbox," Doug wrote in a March posting to the Internet Mail Group QRP-L. "The first day we sold 102. I thought it would taper off pretty fast. Wrong! The second day was even bigger than the first, with 105 more rigs spoken for — 207 kits sold in 48 hours."

New Jersey's George Heron, N2APB, was one of the key players in bringing the housing component of the project into the big picture. NJ-QRP's SMK-1 Enclosure Kit consists of eight cut and drilled copper-clad boards made of double-sided PC material. Soldered and screwed together, they form a very nice housing for the NorCal kit.

Also included are three knobs for the potentiometers mounted in the NorCal SMK-1 transceiver, two one-eighth-inch audio jacks, a 2.1 millimeter coaxial DC power jack and a BNC antenna connector.

Completing the packet are the screws and spacers needed to assemble the cabinet, four rubber feet, and pre-printed front and rear panel labels on clear acetate — suitable for gluing. The enclosure kit is accompanied by a 10-page instruction manual. Pictures of the NJ-QRP SMK-1 enclosure can be seen on the club's web site: www.njqrp.org.

Doug has suggested that when the NorCal SMK-1 "hits your mailbox, build it and if you have problems ask for help on the (Internet Mail Group QRP-L)." He'd like QRPers to make this a learning experience for all, "just like the Elmer 101 series" that became such a popular educational tool several years ago on the 'net.

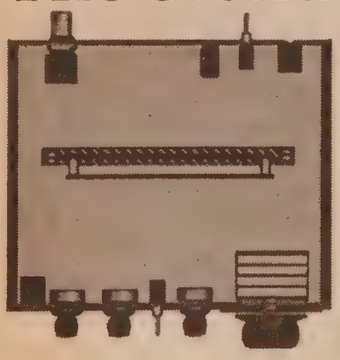
The NorCal SMK-1 Transceiver kit is $30 plus shipping ($4 to U.S. and Canada; $6 Europe and South America; $8 Japan, Australia and Pacific Rim). To order, send a check made out to Jim Cates, WA6GER, to: Jim Cates, WA6GER, 3241 Eastwood Rd., Sacramento, CA 95821. NorCal asks that you include a self-addressed mailing label to make handling more efficient.

The NJ-QRP SMK-1 Enclosure kit is $10, shipped anywhere in the world. To order, send a check made out to George Heron, N2APB, to: George Heron, N2APB, 2419 Feather Mae Court, Forest Hill, MD 21050.

If you get the feeling that QRP is only scratching the surface of a brave new world of homebrewing, I couldn't agree more. And, thankfully, people like Doug, Dave, George, NorCal and NJ-QRP are leading the way.

—Richard Fisher, KI6SN can be reached at: 1940 Wetherly Way, Riverside, CA 92506 or via e-mail: KI6SN@aol.com.

The Sierra



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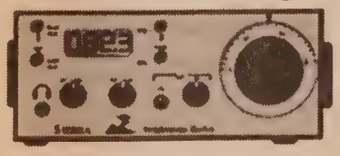

The Sierra is the only compact, low-current, multiband QRP transceiver available. It uses plug-in modules to cover all HF bands. There's no chassis wiring–all components, controls and connectors are mounted on a single board. The superhet receiver has 5 poles of crystal filtering, RIT, and AGC, yet only draws 35mA! Power out is 2 to 3 watts, with fast QSK and no relays. The prototype Sierra is featured on the cover of the 1996 ARRL Handbook, and lab test results can be found in the June, 1996 issue of *QST*.

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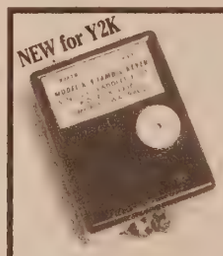

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The Texas Tower Net

John R. Harvey, W9CY

Public Service, Emergency Communications, helping people and having fun — that's what we've been told that Amateur Radio is all about. And that's what it is. I was reminiscing "the good old times" with John, WA5TWL, a Ham friend of mine from Texas, on 20 Meters recently and he suggested share this story with our contemporaries.

I had told him the story of "The Texas Tower Net" that was started in August of 1958 by Al, KIJSB, on Texas Tower #3. The tower was located several miles offshore of Nantucket Island in the Atlantic Ocean near the State of Massachusetts. Frank, WIEUE, on Cape Cod was the net control.

This net met daily at 12:30 p.m. on 3.935 MHz until 1:00 p.m., or thereabouts, in order to provide communications from Air Force and other personnel stationed on the Texas Towers to their friends and families. Tower #3 was supported by the Otis Air Force Base on Cape Cod. The three Texas Towers were developed by the U.S.' military to give us an early electronic (Sonar and Radar) warning of a possible air or sea attack by the Soviet Union — considered a threat at that time. Hundreds of Russian fishing vessels with electronic gear were off the coast of New England and the eastern U.S. listening for and monitoring our military communications and services.

The Texas Towers were built similarly to modern day oil rigs off the coasts of many countries. They consisted of three large tubular legs with a flat deck on top for landing helicopters and three large domes on the deck for radar and microwave communications. The government placed these towers off the coast of New Jersey, Massachusetts, and between Maine and Labrador. About 60 people manned each tower. The Texas Tower radio net, however, mainly communicated daily with tower #3 off the coast of Cape Cod and tower #4 — "old shaky legs" located off the coast of New Jersey (named for its extremely long legs into the ocean and the shaking which occurred from storm waves) and Tower #2 offshore between Maine and Labrador (George's Banks). Additional Towers #1 and #5, although planned, were never constructed.

One of the Texas Towers.

It was extremely hot on these towers in the Summer and exceedingly cold in the bitter storms of Winter. The hollow legs of these towers held fuel oil for heating and fresh water for drinking and cleaning in order to deal with daily needs and harsh weather conditions. Air conditioning was a must in the Summer. According to International law a boat or facility abandoned at sea for any reason, like during severe weather, it's "finders-keepers."

Amateur Radio station W1EUE from Cape Cod was the net controller on most days. Frank "Trader" Horn was a congenial, helpful, and a friendly person. Daily messages were exchanged between personnel on the towers and those on shore via this net. The call signs of these towers were K1FDJ for #2, K1JSB for #3, and K1JYZ for #4 (Old Shaky Legs). K1JSB was the most active of the stations. Several operators at this tower held forth daily. The stations K1AIR and K1LJZ were connected with Otis Air Force base. Al and Russ who started the net Lee, Curt, and Harold all operated on 75 Meters from this tower regularly. On several occasions the operators from "Old Shaky Legs" reported storms that were vibrating the tower like a boat during the storm seasons of 1959 and 1960. A disabled Amateur Radio operator, Dave Noble, W1SGL, from Martha's Vineyard (an island off the coast of Massachusetts) communicated with the tower net almost daily bringing good wishes and optimism to those isolated on these towers.

It was Hurricane Donna in September of 1960 which swept up the East Coast that weakened the structure of "Old Shaky Legs." Civilian workers were brought to this tower to help in the repairs. As with all the towers, bad weather and high waves often prevented their early return to the shore. It was during this time that local newspapers carried stories about the gallant people on the towers and of the Amateur Radio operators on shore. The *New Bedford Standard-Times* and the paper in my area Attleboro, Massachusetts carried stories of my noon time communications with others on the net. Some of the other station operators mentioned included: K1GAU, K1LEK, K1JNM, K1JSL, W1CGS (U.S. Coast Guard Station), W1TXL, and K1LJZ (Otis Air Force base).

It was in early January of 1961 that a raging snow storm came up the east coast and destroyed tower #4. The crew of 28 which consisted of 14 military personnel and 14 other civilian workers, died in this disaster. One horror story that followed this incident was that rescuers on the scene shortly after the tower went down heard sounds they felt might be coming from the tower and might be from someone caught inside, Since the sounds were not Morse code, or had no definite rhythm, they changed their opinion. Sounds must have been coming from some metal elements banging against the metal walls. Later, they found the medic trapped in an air pocket inside the sunken tower. He had, however, died of exposure. He was found in the radio room with a rope tied around his waist to the tower structure in an attempt to hold him up into the air pocket. The rescuers then realized that he had been trying to contact them. This tragedy was of concern to those "Hams' checking into the "Tower Net" and was widely publicized in newspaper, radio, and television.

On Thursday morning 19 January 1961 it began to snow in Southern New England. It turned into a blizzard of blinding, heavy, wet snow. It snowed all night and by Friday morning it was a "white out." There was an accumulation of several feet of snow on the streets and roads that made transportation almost impossible. No one was going to work

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in the Attleboro, Massachusetts area. At about 10:00 a.m. I was in my snow boots attempting to shovel out the driveway of my home in Mansfield, adjacent to Attleboro and Norton, Massachusetts. The snow was nearly up to the bottom of my mailbox on its post and no snow plows had even attempted to open my street. I looked up and saw a set of headlights that was slowly moving toward my home — I said to myself, "This must be the snow plow."

As I peered through the falling snow, I recognized the vehicle coming toward my home was a large station wagon and that it was heading for my driveway. When it came to a stop, stuck in my driveway, two women slowly made their way out of the vehicle. The driver identified herself as Mrs. Betty Goulet from Attleboro. She introduced her passenger as Mrs. Ozzie Caswell from Norton, Massachusetts. Both women were mentally exhausted after the hazardous drive to my home through the snow. Mrs. Goulet asked me to verify that I was the Amateur Radio operator who contacts the Texas Towers almost daily that had been written about in the local paper. I said, "yes." She proceeded to tell me that her friend's husband was stranded out on Texas Tower #3 and they were afraid the tower had gone down into the ocean and that her husband was gone. (The scare from Texas Tower #4 "Old Shaky Legs" collapse was very real).

Both women were crying and they were desperate. As they entered my home, my wife offered fresh coffee and prepared some. But they couldn't think about coffee. It was only a little after ten in the morning and I explained to them that the net usually didn't operate until shortly after noon. I then asked them to come into my "shack" and that I would attempt to get someone on the net frequency who might help us.

As I tuned up the Viking Valiant transmitter and listened with my Hallicrafters SX-101 Mark III receiver on the net frequency, I began to worry that the Tower might really have sunk. Mrs. Caswell told me she had been trying to contact her husband for the past two days via the telephone line and microwave setup through Montauk Point, Long Island, which the government had set up for communications with tower #3. The government telephone operators had refused to put her calls through. Had tower #3 gone the way #4 had — and disappeared?

I knew this was not an absolute emergency requiring an S.O.S.. call, but it was urgent. So, I looked up the emergency international terms for various emergencies and found the word "PAN" which means urgent. So as I transmitted on the Net frequency of 3.935 MHx. I repeated the word "Pan" and said urgent call for Texas Tower #3 regarding the safety of those on board. After a few minutes of this station on Cape Cod (K1GAU/1, Mack) answered and then put a telephone call into the radio operators at Otis Air Force base. K1LJZ, the Ham station at the base, placed a telephone patch call from the base to the tower and suddenly the Texas Tower #3 station came on the air. K1JSB was talking to me. Lee, the operator asked me what the problem was and I told him the story. He immediately got on an intercom on the tower and, miracle of miracles, there was Ozzie Caswell's voice coming through. In the shack, the tears began to flow from all three of us, Mrs. Caswell spent the next 15 to 20 minutes sharing her worries, concerns and love with her husband. The radio operator on tower #3 then shared the story of why the telephone calls had not been put through. "It was," he said, "because of the priority of military traffic," He noted that everything was normal and there was no need for further worry about the safety of those 60 plus people on the tower.

We shut the station down, and went to the kitchen for coffee and smiles. During the coffee time Mrs. Caswell shared that her husband was an electrician, hired by an electrical company to repair the air conditioning on the tower. He had been there about a month and was due to get home. The weather, however, had prevented a helicopter landing on the tower to bring him home. No boats could approach the tower due to the high waves.

Following the weather clearing and in the days to follow Mrs. Caswell brought her children out to the house regularly and K1LJK was able to provide communications for her family to her husband. Several months went by and during the Spring weather Ozzie Caswell finished his work and was brought to shore and back to his home. He and his wife came out to visit with me and Ozzie talked to his recent friends on the tower. This was an exciting and rewarding experience — Amateur Radio helping people.

As the technology changed, other defensive systems acquired, and military satellites were developed, the need for the "Texas Towers" no longer existed. In the later part of the 1960s the two that were left were dismantled and the "Tower Net" ceased operations. Time has gone on and most of the operators have become silent keys over the years. As far as I know, only three or four of us are still around. But, like radio waves that go on forever, these memories travel through time.

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The 6M opening of September 22

It's not unusual to see 6M spots on PacketCluster here in the Midwest. Most of the time these 6M openings involve openings between the East Coast, the Midwest, and the South. But the night of 22 September of last year was very special — the 6M spots rolling across the screen around 8 p.m. local time (0100 UTC September 23) were from Midwest stations, and they were working VK4s in Australia.

Earlier in the evening I kind of suspected something was up when I listened to 10 Meters between 5 p.m. and 6 p.m. local time (2200 to 2300 UTC). All the LU stations were somewhat distorted and seemed to have flutter, too.

These characteristics usually indicate increased magnetic field activity, and sure enough the planetary k-index Kp shot up to 8 in the 2100-0000 UTC time period (the planetary A index for 9/22 was 85). Let's take a detailed look at this 6M opening in order to try to understand how this rather unusual propagation happened.

The first thing we'll do is look at the F2 region critical frequency foF2 along the VK4 to W9 path to see if 50 MHz propagation could be supported.

This is the thick solid double-humped curve in Figure 1, and it comes from a propagation prediction software package. The thinner dotted straight curve is the critical frequency needed to support a 4,000 km hop at 50 MHz with an F2 region peak altitude of 350 km. It comes from Table I in my March 1997 column — the MUF (maximum usable frequency) is about 3.2 times foF2. This means foF2 needs to be just below 16 MHz to support 50 MHz propagation.

As can be seen, the thick solid critical frequency curve all along the path isn't enough to support 50 MHz propagation. So what's the deal here?

How did this happen?

Two issues have to be considered. The first issue is that the foF2 data is the monthly median data because it comes from a propagation prediction program. That's how they are set up — a correlation of smoothed sunspot number (SSN) to monthly median ionospheric parameters. This says the critical frequency should be at least what the curve says on half the days of the month. But on a few days of the month it will be even higher. The second issue is that the critical frequency was probably affected by the elevated K index. I discussed this in my July 1999 column. It showed that the critical frequency can increase at low and even middle latitudes with elevated K indices.

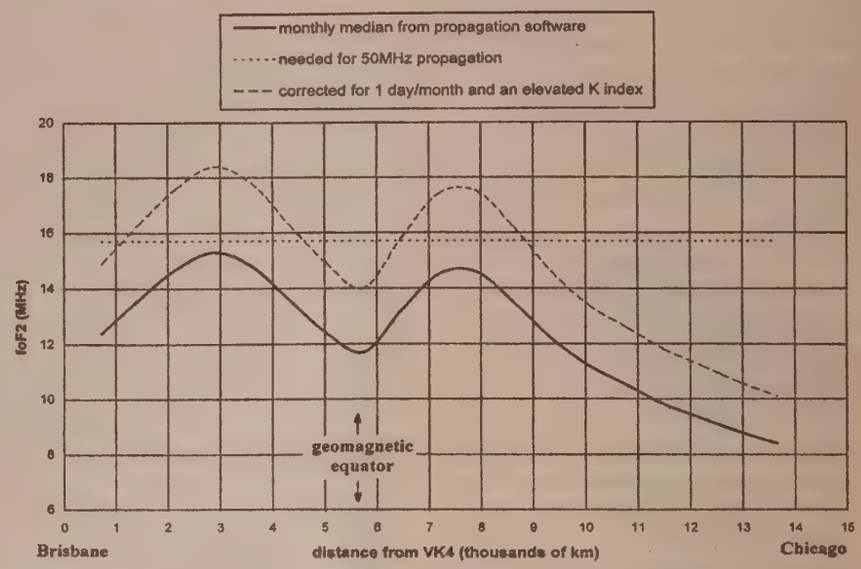

Fig. 1 F-Region Critical Along the VK4 to W9 Path for 9/23/00 at 0100 UTC

So what I've done is take my best guess at what the critical frequency really looked like under the conditions of the evening of 22 September. To do this I used the tabular data from CCIR Supplement to Report 252-2 and a paper by R.M. Davis, Jr titled "Short-term prediction of F2-layer MUFs from local magnetic activity." The result of this effort is the thin dashed double-humped curve of Figure 1. Although this curve looks like it was just scaled upward by a constant, in reality the correction for one day per month favored the W9 end and the correction for an elevated K index favored the VK4 end. Thus the corrected curve exhibited a "self-leveling" effect and appears as if it were just shifted upward.

The bottom line in all this is that the VK4 end of the path now looks explainable. Not only can a normal F region hop be supported, but the double-humped characteristic of foF2 centered on the geomagnetic equator is a tell-tale sign of possible transequatorial propagation involving a long hop without an intermediate ground reflection (called a chordal hop — see my October 1998 column for more details). Thus the VK4 end of the path can be explained without too much trouble.

The W9 end of the path is more difficult to explain due to the low critical frequencies, but it's not hopeless. More than likely the explanation would be sporadic E. Looking at Figure 1 of my June 1997 column about sporadic E indicates that there is a possibility during the month of September in the early evening hours. But the data in this figure is for 10 Meters, not 6.

After digging around a bit, I found a plot of the probability of 50 MHz sporadic E by month and local time based on two years of data. What's interesting is the fact that the probability of 6M sporadic E peaked at about a 15 to 20 percent chance of happening from about 6 p.m. to 10 p.m. in the month of September. That fits nicely with the PacketCluster spots around 8 p.m. local time.

So with a little detective work, a reasonable explanation for this opening can be put together — F region hops (with a hint of a transequatorial chordal hop) on the VK4 end, and sporadic E on the W9 end.

One final comment about distortion and flutter as mentioned in the second paragraph is appropriate. Usually these are associated with the auroral zone. But the path from LU to W9 isn't near either auroral zone. What's going on? I believe it's tied to the South Atlantic Anomaly, which will be the topic of a future column.

— Carl Luetzelschwab, K9LA, can be reached at: 1227 Pion Rd., Ft. Wayne, IN 46845 or you can e-mail him at: k9la@gte.net.

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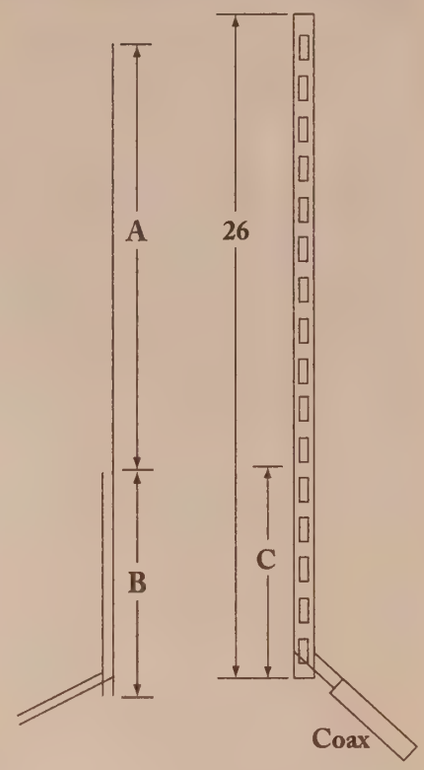
The J-pole

Recent issues of a major amateur magazine carried an article on the J Pole antenna. Several of Kurt's readers questioned some of the statements in the article. One reader even wonders if the J-pole is a good design. He says it is only seen in the Amateur Radio literature and not in engineering textbooks.

Let Kurt assure you that it is a good engineering design. It was originally designed for commercial use as an antenna for the early police radios. There was a description in the August 1935 issue of *Electronics* magazine.

At that time it was called the "Flagpole" antenna. This gives a clue to the way it was installed. Kurt thinks this idea may be useful in this day of antenna restrictions and the search for disguised "stealth" antennas.

He will give the electrical details of two 10-meter versions. It will be up to you to mount it on your flagpole or make a flagpole out of it or devise some other mounting scheme.



How it works

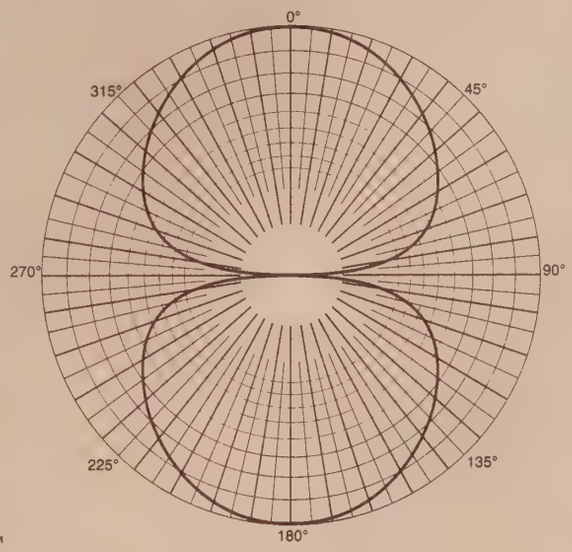
The original flagpole antenna used coaxial cable feed. But this was back when amateur transmitters and receivers were made for open wire line. Coaxial cable didn't come in to widespread amateur use for another twenty years. So there soon appeared open wire line versions of the Flagpole. And the name changed to "J-pole" from the appearance of the antenna and its matching section. Kurt will show both coax and ladder line versions.

The drawing of Fig. 1 shows the 10-meter J-pole design by Stewart Becker, W7AYI3, as described in *QST* fifty years ago.

Section A is a half-wave vertical antenna fed at the bottom end. This is the high impedance point on the antenna. It looks like, maybe, 2000 ohms or even higher.

The U shaped section B is a quarter-wave transmission line or "stub." It is shorted at the bottom. A quarter wave line shorted at one end looks like an open circuit, or at least a high impedance, at the other end. So this matches the antenna. If you tap down on the quarter wave line the impedance gets lower the further down you go. W7AYB found a good match to 300 ohm line at a point eleven inches above the short. If you go higher up you can match 450 ohm line.

W7AYB made the antenna from "stranded antenna wire" with the antenna (A) 16 ft. 2-1/2 inches long. The matching section (B) was 8 ft. 2 inches long with 1 inch spacing between the two wires. He grounded the shorting bar. That's a big advantage of this antenna for use in areas suffering from static electrical charges and lightning.



Simple J-pole

Krusty Old Kurt has designed a really inexpensive and simple version of the J-pole. Coaxial cable is now common in Amateur Radio so he has gone back to the coax feed used by Western Electric police installations 70 years ago. The wide-spaced open wire line used by amateurs in the olden days has given way to plastic insulated "ladder line." So that is used for the matching section and for the antenna itself.

As shown in Fig. 2 the antenna consists of one 26-foot piece of 450-ohm ladder line. One of the wires is cut 7-feet 9 inches from the bottom end. This forms the matching section (C) which is open at the top.

The antenna section has the wires connected together top and bottom. This improves the bandwidth over a single-wire antenna.

The coaxial line connects 10-1/2 inches from the bottom of the matching section, center conductor to one wire, shield to the other.

Use a balun here. The easy way is to put two inches length of 43 mix ferrite beads over the cable. If you ground the antenna do so where the coax shield connects to the matching section.

Adjustment

These dimensions may have to be changed a bit in your installation depending on the characteristics of the ground, presence of nearby trees and buildings, and what part of the band you operate in. He had 1.0 SWR at 28.5 MHz rising to 1.2 at 28.0 and 29.0 MHz. To raise the resonant frequency shorten the top (antenna) section; to lower it, lengthen it. If the SWR at resonance is not 1.0 move the coaxial line connection up or down a little on the matching section.

You can do without a supporting structure and just hang the antenna from a "sky hook" of some kind. If you do, you should bridge the point where the ladder line was cut with something non-conducting so as to give more mechanical strength to the assembly.

Radials

As all those ads for "half-wave" verticals tell you, you don't have to have radials under this type of antenna. What they usually don't tell you is that you'll get improved signal strength, maybe even one whole "S" point, if you do have a ground screen or radial system under your half-wave vertical. So keep that in mind. Kurt told you so.

Contest Calendar

Contest	Date & Time	Bands	QSO points	Multipliers	Exchange	Entry Categories	Entries
Massachucetts QSO Party (USA)	1800z 6 May 2100z 7 May 0400-1100z off time for all entrants	All bands	1pt/Phone QSO 2pt/CW, digital, sstv QSO Stns outside MA Work MA stns only; MA stations work everyone.	Stns outiside MA: MA counties (14) on each band MA stns: MA counties, US States, Canadian Provinces and territories, DXCC on each band.	RST QTH	- Outside MA - MA Single op - MA Multi-op - MA Portable - MA team (5 MA single ops)	6 Jun FARA POBox 3005 Framingham MA, 01701 USA email n1tyh@aol.com
ARI DX (Italy)	2000z 6 May 2000z 7 May	160-10M CW, SSB and RTTY	0pt/VE 1pt/NA 3pt/DX 10pt/Italy	Italian Provinces (103) + DXCC on each band Is will send a 2-letter province abbreviation.	RST Ser#	Single op: All modes, single mode Multi-op, single tx SWL	1mo Box 14 27043 Brioni (PV) Italy
Connecticut QSO Party	2000z 6 May 2000z 7 May (0400-1200 off time for all)	160-2M Phone CW RTTY	1pt/Phone, RTTY QSO 2pt/CW QSO 5pt/QSO with W1QI or W1AW	Connecticut counties CT stations count CT counties, US States, Canadian Provinces and Territories, DXCC countries.	RST QTH	Single op: fixed, mobile, Novicce, QRP Multi-op: Single tx, multi-tx	7 June CARA, POBox 3441, Danbury CT 06813-3441 USA
Nevada QSO Party	0000z 6 May 0600z 7 May	160-6M CW SSB RTTY Packet	1pt/Phone QSO 2pt/other modes	Nevada counties Nevada stns count Nevada counties, US States, Canadian Provinces and Territories, DXCC countries	RST QTH	unknown	NW7O
Oregon QSO Party	0000z 6 May 2359z 7 May	All Amateur bands (exc 10, 18, 24MHz) All modes	1pt/Phone QSO 2pt/CW QSO	Oregon counties (36) Oregon stns count Oregon counties, US States, Canadian Provinces and Territories, DXCC countries	RST QTH	Single Op Multi-op Mobile Novice/Technician	30 June K9QAM
A. Volta RTTY (Italy)	1200z 6 May 1200z 7 May	80-10M RTTY		DXCC + Call areas in Canada, Australia and USA	RST Ser# CQ Zone	Single Op: All bands, single band Multi-op single tx; SWL	31 Jul Box 55 22063 Cantu
Indiana QSO Party	1800z 6 May 2300z 7 May	160M-70cm CW and Phone	2pt/Phone QSO 3pt/CW QSO	Indiana counties Indiana stns also count US States, Canadian Provinces and territories and DXCC countries	RST QTH	Single Operator Multi-operator VHF/UHF	11 June: Sharon Brown, 905 W Parkway Dr, Pleasant Lk, IN 46779 USA
CQ-M Int'l DX Contest (Russia)	2100z 6 May 2100z 7 May	160-10M +satellites CW, SSB and SSTV	1pt/own country 2pt/other NA 3pt/DX	DXCC countries + Russian automous oblasts, Arctic islands, Crimea (UU), 4U1VIC (see full rules)	RST Ser#	Single Op Single band: Mixed mode, CW only, SSB only, Satellites Single Op All Bands: Mixed mode, CW only, SSB only, QRP; Multi-op single tx; SWL; World War II veterans; SSTV only	1 July CQ-M Ctte Box 88 Moscow Russia or e-mail to: cqm98@mai.ru
European Spring Sprint SSB	1500z 13 May 1859z 13 May	80-20M SSB	1pt/QSO	None	your call, other stn's call, Ser#, name	Single operator only	15 days DL6RAI
Baltic Contest (Lithuania)	2100z 20 May 0200z 21 May	80M CW & SSB	2pt/QSO Work ES LY YL only	None	RST Ser#	Single Op: Both or single mode; Multi-op, single tx; SWL	1 Jul Box 210 Kaunas LIT
CQ-VHF Spring Specialty Modes Activity Weekend	19-21 May Nine 6-hour periods starting at 1800 local time.	Video, RTTY, AMTOR, Packet and other digital modes on all Amateur bands above 50MHz Repeaters may be used	1pt/50, 144MHz QSO 2pt/222, 432MHz QSO 3pt/902, 1296MHz QSO 4pt/2304MHZ and higher QSO Work each station once per band in each 6-hour period.	Grid squares worked on each band	Grid square	Single Op Fixed Station: - QRP (max. 10w) - QRO (more than 10w out) Multi-op Fixed station: - QRP (max. 10w) - QRO (more than 10w out) Rover	30 days CQ Magazine or e-mail to weekend@cq-amateur-radio.com
Texas QSO Party	1400z 20 May 2200z 21 May (0500-1400 off-time for all)	80-2M CW & SSB	1pt/SSB 2pt/CW 5pt/Mobiles 7pt/Mobiles in CW	Texas counties (254) Texas stns count Texas countiues, US States, Canadian Provinces and Territories and DXCC countries	QTH	Single op: Fixed, Mobile, QRP Multi-op: Fixed, Mobile, QRP	30 June Box 540291 Houston TX 77254-0291 USA
CQ WPX CW	0000z 27 May 2359z 28 May	160-10m CW	0pt/VE 2pt/NA 3pt/DX x2 on 160 80 40m	Total of prefixes worked, regardless of band	RST Ser#	Single Op: All ands, Single band, Assisted, Low power, QRP Multi-op: Single or Multi-tx	1mo. CQ mag
IARU Region 1 50MHz	1400z 3 Jun 1400z 4 Jun	6M CW & 'phone	1pt/km (to convert degrees to km, mult by 112.2)	None	RST Ser# Grid locator	Single op using own equipment; All others	7 weeks OZ1EYN
Portugal Day Contest	0000z 10 Jun 2400z 10 Jun	80-10M SSB	6pt/CT, CU 3pt/others 0pt/own country	Portuguese distrcits and DXCC countries worked on each band	RST Ser# CT, CU will send name of District or region	Single Op All Bands only	31 July PO Box 2483 1112 Lisboa PORTUGAL
Australian QRP Day	0700z 10 Jun 1200z 10 Jun	160-10M CW	3pt/P2, VK, ZL 1pt/others	None	RST Ser#	Single Operator Ony	10 July VK4EV
TOEC Field Contest SSB (Sweden)	1200 10 Jun 1200 11 Jun	160-10M SSB	1pt/NA 3pt/DX 3pt/any mobile	Total of Maidenhead "Field" locators. The first two letters of you grid square are your "Field".	RST + Grid square (ie. FN25)	Single Op: All and, Low power, Single band Multi-op: Single or multi-tx Single op entrants may not use use PacketCluster	1mo. Box 2063, S-831 02 Ostersund Sweden
WW South America CW (Brazil)	1200z 10 Jun 1800z 11 Jun	80-10m CW	0pt/VE 2pt/NA 4pt/DX 8pt/South Am.	DXCC + South Am. prefixes on each band Final score is the sum of band-by-band scores	RST Ser#	Single Op: All bands, Single band, QRP Multi-op: Single or multi-tx	30 days Box 282 RioDeJan. 20001-970, Brazil
ARRL VHF QSO Party	1800z 10 Jun 0300z 12 Jun	50MHz to microwaves	1pt/50 or 144MHz QSO 2pt/220 or 432MHz QSO 3pt/903 or 1296MHz QSO 4pt/above 2304MHz NOTE: do not use 146.52 or any repeaters	Grid squares worked on each band	Grid Square	Single Operator: Multi-band, single band, QRP portable (max 10w out) Rover (single or multi-op, operating from at least two grids); Multi-op: Limited Multi-op (max four bands)	30 days ARRL or e-mail to JuneVHF@arrl.org
West Virginia QSO Party	1800z 11 Jun 2400z 11 Jun	160-10m CW & SSB	1pt/SSB QSO 2pt/CW QSO 25pt for your first QSO with WVARC club station W8WVA	Stns outiside WV: WV counties (55) regardless of band; WV stns: WV counties, US States, Canadian Provinces and territories, DXCC ragradless of band.	RST QTH	None indicated	15 July WA8WV or by e-mail to WA8WV@aol.com

Addresses: CQ - 25 Newbridge Rd., Hicksville NY, 11801 USA. ARRL - 225 Main St, Newington CT, 06111 USA. Callsign - Callbook Address
Bands: The 30, 17 and 12m bands are never used in any contest. Please confirm the dates of these events on the intrenet at http://home.sol.no/~janalme/hammain.html or http://www.sk3bg.se/contest/

To subscribe call: 1-800-366-9192

Hamfests — May

ARIZONA

Cochise ARA Hamfest, 06 May 6 a.m. to 2:30 p.m. at 2756 Moson Rd, Sierra Vista, AZ. Adm: $2, tailgaters $5, inside tables $7. TI: 146.75 (PL 162.2) For info: Dale Tongue, KA7IQV, telephone 520/458-5051, e-mail: tongue@c2i2.com.

ARKANSAS

Siloam Springs ARC Hamfest, 06 May, at St. Mary's Catholic Church(1996 Hwy 412 E. Siloam Springs). Adm: $4. Tables: $6. Seminars about building antennas and computer trouble shooting. For info: Kathie Engelke 501/524-2969, email: kd5eyx@qsl.net, or Sherri Hyde 501/524-4797, email: shyde3@juno.com. Website: www.qsl.net/ssarc

FLORIDA

The St. Petersburg ARC's Lake Maggiore Swap Meet/Tailgate, 07 May, 8 a.m. - 1p.m., at Lake Maggiore Park(9th St. and 38th Ave S., St Petersburg, FL) Adm: FREE. Tables: $2. Refreshments, flea market, tailgating. TI: 147.060+. For info: Gerald Dee Turner, N2MNC, 10132 64th St. N, Pinellas Park, FL 33782. Phone: 727/548-7474. Email: n2mnc@netzero.net.

ILLINOIS

Kishwaukee ARC DeKalb Hamfest, 07 May 8 a.m. - 1 p.m. at Sandwich Fairgrounds, Sandwich, IL (Just north of Rt. 34 instersection of Suydam and Gletty Roads). Adm. $5 (adv) $6 (at the gate), Free outside tailgating, Overnight camping on fairgrounds (power hookups $10). TI 146.73(-) or 146.52. For info and reservations: Bob Yurs, W9ICU, telephone: 815/895-3219, e-mail: w9icu@tbcnet.com, or see web page: http://tbcnet.com/~jleonard/hamfest.htm.

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Chicago ARC Hamfest, 28 May, 8 a.m. - 2 p.m., at DeVry Institute Of Technology(3300 N. Campbell, Chicago, IL) Adm: $4/adv, $5/ door(under 12 FREE). Flea market(outside): FREE. Tables(inside): $1.50 per ft. Set-up: 6 a.m. For info: Geogre 773/545-3622, or Dean 708/331-7764, or write CARC, 5631 W. Irving Pk. Rd., Chicago, IL 60634

KENTUCKY

Big Sandy ARC County Music Highway Hamfest, on 06 May, at Louisa Middle School(Louisa, KY). Adm: $2. Tables: $3. TI: 147.390(+). For info: Fred Jones, WA4SWF, 511 N. Lackey Ave., Louisa, KY 41230. Phone: 606/638-9049. Email: wa4swf@foothills.net. Website: http://www.qsl.wa4swf/index.html.

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Pennyrile Area Tailgate/Fest, sponsored by four W. KY clubs 27 May at Pennyrile Forest State Park, 5mi. south of Dawson Springs, KY. 6 a.m. to 1 p.m. No fees. V.E. exams, food, drinks, prizes. For info: Curt 270797-9117; e-mail: ke4uze@spis.net , or Mike 270/365-7777, e-mail: kf4qdx@apex.net.

LOUISIANA

Baton Rouge ARC Hamfest/Computer Show/ARRL state convention 05 & 06 May at Baker Civic Auditorium, 3325 Groom Rd., Baker, LA. Setup 8 a.m., open 5 p.m. - 9 p.m. Friday, 8 a.m. - 4 p.m. Saturday. Adm. $4 (adv) $5 (at the door). Commercial exhibits, flea market, limited outdoor tailgate space. RV hookups avail. For info: Herb Ramey, W5LSU, 225/654-6087, 800/256-FEST, Fax: 225/654-5730. E-mail: W5LSU@worldnet.att.net, web page: www.brarc.org.

MARYLAND

The Maryland F.M. Association Hamfest will be 28 May, from 8 a.m. - 2:30 p.m. at the Howard County Fairgrounds. Admission: $5. Tables: $20 advanced, $25 at door. Tailgate: $5. Talk-in: 146.76, 224.76, 444.00. Reservations: Mike, WA3TID. P.O. Box 19 Annapolis Junction, MD 20701. Ph. 410/923-3829.

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The Antietam Radio Association's Great Hagerstown Hamfest & Computer Show will be on 7 May, at the Hagerstown Community College Recreation Center. Admission: $5(under 12 FREE). Tables: $10 advanced, $15 at door. Tailgating: $5. VE exams, Food available, Fleamarket, Prizes. Talk-in: 146.94 & 147.09 Repeaters, W3CWC. For more info: Tina Jones, KB8ZQM, 304/728-7769. Email: kb8zqm@intrepid.net. Fax: 304/728-3024. Website: www.qsl.net/w3cwc.

MICHIGAN

Wexaukee ARC Amateur Radio/Computer Swap Meet 06 May at Cadillac Junior High School, Cadillac, MI. Open 8 a.m. - 1 p.m. Adm. $5, Tables $8 per 8 ft. table. VE exams (p/r only). TI: 146.98.For info: 231/862-3774; e-mail ammcconnell3@hotmail.com. Exam info: 231/829-3433; e-mail avanant@netonecom.net or write Wexaukee ARC, P.O. Box 163, Cadillac, MI 49601

MINNESOTA

The Arrowhead Radio Amateur Club Hamfest, on 06 May, from 9 a.m. - 2 p.m., at the Head of the Lakes Fairgrounds(4700 Tower Ave., Superior, WI). Admission: $5(12 & under FREE). Tables: $5(4ft), $10(8ft). Set-up: 7:30 a.m. VE exams, door prizes. Talk-in: 146.34/94 repeater. For more info: Bud Fisher, KB0SBL 218/879-9284. Email: kb0sbl@cp.duluth.mn.us.

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Hamfests

MISSISSIPPI

Jackson County ARC Hamfest 26 & 27 May, at Civic Center, Jackson County Fairground. Setup at noon Friday, open at 5 p.m. - 9 p.m. Friday, 8 a.m. - 2 p.m. Saturday. Adm $2.50, $10 for immediate family. Tables $8. VE exams. RV parking available. Info: Charles Kimmerly, N5XGI, 19000 Busby Rd. Vancleave, MS 39565; 228/826-5811. E-mail: montehat@datasync.com

NEW YORK

Metro 70cm Network Computer & Electronic Flea Market, on 07 May, & again on 24 Sept., 9 a.m. - 3 p.m., at Lincoln High School(Kneeland Ave, Yorkers, NY) Adm: $6(under 12 FREE). Talk-in: 440.425(PL 156.7), 223.760(PL 67), 146.910, 443.350(PL 156.7). For info call, Otto Supliski 914/969-1053.

RHODE ISLAND

Rhode Island Amateur RF repeater Service, Inc.'s Spring Flea Market & Auction, 20 May, at VFW Post 6342, Main St. Forestdale, RI. TI: 146.76 repeater. Flea Market Space: $5. Info: Rick Fairwweather, K1KYI, 106 Chaplin St., Pawtucket, RI 02861. Email: k1kyi@arrl.net. Phone: 401/725-7507(call between 7 and 8 p.m.)

TEXAS

Key City ARC Hamfest, 06-07 May, 8 a.m. - 5 p.m. Sat., 9 a.m. - 2 p.m. Sun., at Abilene Civic Center. Adm: $7/adv, $8/door. Tables: $6. Free Parking, VE exams, RV parking(w/ nominal fee) TI: 146.160/760. For info: Peg Richard, KA4UPA, 1442 Lakeside Dr., Abilene, TX 79602. Phone: 915/672-8889. Email: ka4upa@arrl.net

WASHINGTON

W7AQ, Yakima ARC Ham Convention, 13-14 May at the Masonic Center(510 N. Naches Ave., Yakima, WA). Adm: $5(under 12 Free). Tables: $10. Banquet: $12.50(6:30 Sat night). Food available, prizes. TI: 146.660 PL 123.0. For info: C. Jo Whitney 509/965-3379. Website: http://eagle.ykm.com/~w7aq/hamfest.html.

WISCONSIN

Ozaukee Radio Club's Cedarburg Swapfest, on 06 May, 8 a.m. - 1 p.m., at Circle-B Recreation Center(Hwy 60 & County I) Adm: $4. Tables: $5(4ft). Set-up: 6:30 a.m. Food & refreshments available, VE exams. TI: 146.37/97 & 146.52. For info send a SASE to Joe Holly, ORC Swapfest Chairman, 1702 Holly Lane, Grafton, WI 53024. Phone: 262/377-2137.

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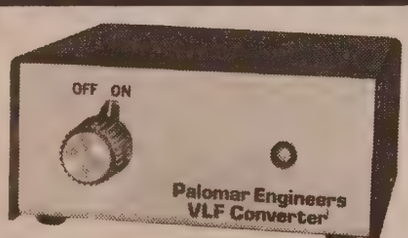
Arrowhead Radio Amateur Club Hamfest 06 May at Head of the Lakes Fairgrounds, 4700 Tower Ave, Superior, WI., 9 a.m. - 2 p.m., setup 7:30 a.m. Adm $5 (12 and under FREE), Tables $5 (4 ft.) $10 (8 ft.). VE exams. TI: 146.34(+). For info: Bud Fisher, KBØSBL, phone: 218/879-9284, e-mail KB0SBL@cp.duluth.mn.us.

WYOMING

Casper ARC's Wyoming State Hamfest will be 27-29 May, at Radisson Inn(Casper, WY). Adm: $7/ad, $10/door. Tables: $5. Banquet: $17. Listen-in on 146.94(-). For info: Dave Riegert, KB7WON, P.O. Box 2025, Mills, WY 82644. Phone: 370/473-2142. Website: w3.trib.com/~carc

VLF CONVERTER



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Special Events

50TH ANNIVERSARY

Kishwaukee ARC will be operating as W9K to celebrate the clubs 50th Anniversary from 1700Z 06 May to 1700Z 07 May. The special event will be in conjunction with the DeKalb Hamfest. Suggested frequencies: 7.108, 7.235, 14.250 and 28.390 MHz. All stations requesting a certificate received by 20 May will be eligible for a special prize drawing. For certificate, SASE (9x12) to KARC, P.O. Box 371, DeKalb, IL 60115. For info: Don Gray, N9RFR, e-mail: N9RFR@aol.com, Bob Yurs, W9ICU, 815/895-3219 or e-mail: w9icu@tbcnet.com.

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In addition to voice (SSB) operation, several digital modes will be used — RTTY, PACTOR, AMTOR, GTOR and CLOVER.

For a complete listing of times and frequencies, as well as where to send for a certificate, visit the ***Worldradio*** web site at: wr6wr.com, or the MARS web site at: www..asc.army.mil/mars/

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*Information in "New Products" is supplied by the manufacturers to acquaint **Worldradio** readers with new products on the market.*

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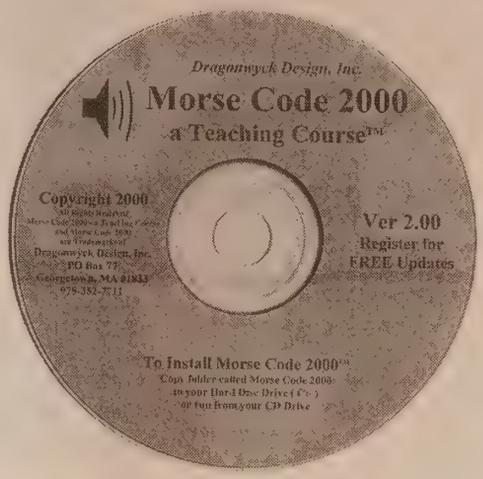

and diagrams showing how to hookup your computer, printer, rig, tutor, etc, to form an efficient and convenient station for teaching code over-the-air! Mock tests are included along with questions and answers. You'll be shown how to teach students what makes up a typical QSO, how to figure out what may be in a typical 5 wpm Morse code test, and how to improve their chances of passing.

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Paddelette Company is pleased to announce the release of the K-4 Iambic Keyer. Housed in a tiny, black box (3/4" x 1-1/2" x 2") and weighing just one ounce, it outperforms keyers many times its size and weight. A professional quality unit, it's both rugged and reliable and will operate for four years on the self-contained lithium coin cell.

The K-4 generates strings of "dits" and "dahs" in response to paddle strokes, and in addition, provides a menu of 12 keying options to the user. These are accessed by holding a push-buton down until the desired Morse character is heard (from the piezo sounder), then releasing the button and following the simple instructions which involves one or both paddles on your paddle key. Menu items include: speed adjust, tune, paddle select, sidetone on/off, straight key mode, iambic mode A/B, beacon, enter message #1, enter message #2, play back message #1, play back message #2, and iambic keyer mode.

The TiCK-4 also features non-volatile memory for speed, mode, paddle select and sidetone on/off. In addition, it includes a timer which prevents it from loitering in the parameter setting menu where battery drain is around 600 uamps. Eighteen seconds after pushing and releasing the push-button (if neither paddle is pushed) it will send a Morse "K," exit the menu and return to keyer mode where battery drain is 1 uamp, key up. This prevents accidental run-down of the battery.

The unit is completely self-contained and includes a custom PCB, the latest TiCK-4 CMOS keyer IC, 1/8" input and output jacks and a 3V, 540 milliampere-hour lithium cell which will power the unit for four years under average operating conditions. The K-4 will key any normal solid-state receiver. Suggested retail price is $48.95 plus $2.25 shipping and handling.

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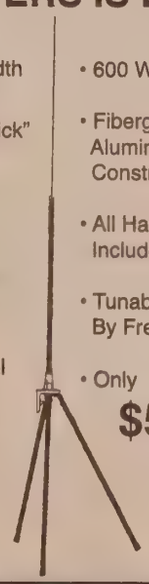

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Digital daydreams... or "automatic Morse" How does it happen?

Robert C. Mazur, VA3ROM

I'm a Canadian Coast Guard Radio Operator. Also, just put down my red pencil as the editor of the local Amateur Radio club newsletter, so I am itching to start writing just for the heck of it again.

Of course, in the Coast Guard we use Morse to overcome language barriers, working "Salties" from around the world. Our shipboard radio operators are usually French speaking only. We have internationally-accepted abbreviations, and of course "Q-codes" to keep the message concise and to the point. So, Morse, besides being a digital code, is a "Lingua Roma" as well. Many a Ham has found himself or herself hospital bound and sometimes without the ability to speak or write. No problem: just revert to Morse and have a fellow Ham translate for the doctors and nurses.

I also worked with a fellow on the Ham bands who suffered from Parkinson's disease. Normally, he had no control over his body except when he used Morse code on the radio. He was over 80 and had a beautiful "fist". I can't send as well as he did, and I nearly fell out of my chair when he told me about his Parkinson's. He had no problem controlling his hand and arm to send code and, of course, he "head copies" code so he doesn't have to write it down. Many of the old timers have such a steady and solid code; it amazes me when they tell me just how old they are. And, they send with an old fashioned hand key. No keyboard or electronic keyer! Obviously, Morse stimulates some part of the brain, and perhaps it reroutes around areas that can't or won't cooperate with the actions of sending and receiving code.

One thing that I noticed, when I really got into Ham radio, my reflexes, memory and general sense of well-being was greatly improved by working code.

I've almost got to the point that I can't tell the difference between thinking, sending, and receiving code. I can hear a voice instead of sounds of code now and then, Then, of course, I realize what I am doing and immediately go out of "sync."

When I was stationed in the high Arctic, after three months of working on the code circuit, I would daydream when copying routine traffic. Usually I'd snap out of it after a few seconds, look down at the typewriter to check that I was typing something coherent, then go back to day dreaming — not much else to do in the high Arctic. My best daydream speed was 25 wpm.

Now, if someone can explain why certain code speeds, even those that are faster than normal, sound better or are easier to copy than others, even those that are slower than normal..... — *Morsels Newsletter*

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